23. Ant-like Spiders from Malaya, collected by the Ammandale-Robinson Expedition, 1901-2. By H. D. Badcock, M.A.*
[Keceived July 7, 1917 : Read October 23, 1917.]
(Text-figures 1-12.)

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The Spiders here described were collected by Dr. Nelson Annaudale and Mr. H. C. Robinson in the Malay States in the years 1901-2, and are now under the charge of the British Museum, South Kensington.

The specimens examined were:-

Many of these were accompanied by ants which have been numbered for reference, but which have not been identified.

The species of Thomisidx and of Agorius are known. Of Myrmarachne, with the exception of M. maxillosa, of which there are 13 specimens, all seem to be new species. Material in the British Museum available for comparison is, however, scanty, and the descriptions and especially the figures dealing with known species are so scattered and often inadequate, that certainty on this point is at present impossible.

Myrmarachne maxillosa female was very common, and it is curious that no male was found. In general shape M. biseratensis is very much like it, but it differs in teeth and tibial spines from all previous descriptions of the male of that species. It may ultimately prove to be a variety.

[^0]M. turriformis is a very distinct species of the Plataleoides group.
M. cornuta is distinguished from all other species here described by the excess of length of the second over the first joint of the pedicel.

The distinction between $M$. albicrurata and M. lateralis is not very satisfactory, and one specimen occurs which suggests that these are only varieties of a single species.

The males M. ramosa and M. gedongensis are well marked, but there is no information to suggest to which (if any) of the females they belong.

The chief diagnostic differences between the various species of Myrmarachne are given in the key preceding the descriptions. The group is a difficult one. In general shape the prosoma falls into three classes, viz., somewhat squat with a narrow and shallow thoracic groove and thorax falling rapidly behind it (maxillosa, biseratensis), caput towering high above thorax (turriformis), and caput and thorax separated by a wide groove of moderate depth with caput not much higher than thorax (all the rest). The prosoma is further characterized by the presence or absence of a wedge of white colour below the thoracic groove, but this is liable to be almost obliterated.

Constriction of the opisthosoma or the absence of it seems a constant character, though its depth and the extent of light coloration about it are variable. The shape of the unguis and armature of the falces in the male are always characteristic.

The shape of the sternum, though in cases appearing very definite, is certainly variable to a considerable extent and except in extreme cases is a doubtful guide. The epigyne appears to differ in the figures, but it is probably more due to differences in condition than specific differences. The male organs all consist of a fine coiled spine of about $1 \frac{1}{2}$ turns with slight, if any, specific differences; but distinction may be based on the relative lengths and shapes of the last three palpal joints and the terminal process of the tibia, none of which, however, is particularly striking.

In both sexes the number of spines below the patella and tibia afford marked distinctions and are probably as good a first guide as anything. They are, however, liable to be rubbed off and are not absolutely constant.

In every case the practice adopted has been to start with a detailed description. This has been followed in the case of Myrmarache by a short description or diagnosis. Finally a note is given stating the place where and circumstances under which specimens were taken, any particulars concerning them and any measurements made. In the case of these last it must be remembered that the specimens, having been in spirit for years, were very brittle and difficult to measure with accuracy, and that the figures given must only therefore be taken as approximate.

In the following descriptions I have used Lankester's terms "prosoma" and "opisthosoma" for the main divisions of the borly, while retaining " caput" and "thorax," employed by Cambridge, as convenient terms for the two parts of the former.

The "thoracic groove" is the depression between caput and thorax. "Cephalic wedge" the werlge of white hairs or colour at the side of the prosoma reaching downwards from the groove. "Wilth " or "height" means greatest width or height.

The eyes are referred to as $1,2,3,4$ in the order-central of front row, lateral of ditto, central of back row, lateral of ditto; the small eye of the Salticidre being considered as 3 in this series.

The intervals between the eyes are expressed as $1.1,1.2$, dc. When the shape of a quadrilateral of eyes is mentioned it is considered as the quadrilateral circumscribing the eyes in question. The letters $f, b, o, u$ referring to an eye indicate that it is dinected forward, backward, ontward, upward.

The basal end of the groove of the falx is the end nearest the root of the unguis.

The joints of the legs are referred to as $c, t r, f, p, t i, m$, and ta, with a subscript letter to denote the particular leg where necessary; thus $\operatorname{tr}_{3}$ means "trochanter of third leg." $\mathrm{j}_{1}, \mathrm{j}_{2}$ refer to joints of pedicel.

In describing the prosoma the order adopted has invariably been : (a) as seen from above, (b) from the side, (c) from in front. In the case of the falces and opisthosoma it has been (a) from above, $(b)$ from the side, (c) from below, though in none of these has it always been thonght necessary to describe from all these positions.

The upper margin of the groove in the falces is always that furthest from the maxille, even thongh this in the case of Amycire and some female Salticids may more correctly be described as " outer."

## Fey to Myrmarachne mentioned in this paper.

1. a. Second joint of pedicel much greater than first. Opisthosoma constricted
cornuta.
b. Second joint of pedicel eqnal to or more often much less
than first ...........................................................................


2. a. Perlicel short... ........................................................ .... 4
b. Pedicel long ........ .................. ...... ........................ turviformis.

b. Spines on 1st tibia 5 pairs
biseratensis $\delta$.
3. a. 1st patella no spines, 1st tibia 4 pairs............................. albicrurata ㅇ.
b. 1st patella 1 spine

6
c. 1st patella 1 pair of spines, 1 st tibia 6 to 7 pairs ........... 7

l. 1st tibia 5 to 6 pairs .......................................................................

〕. No white werlge .....................................................................................

## Thomiside.

Strigoplus E. Simon, 1885.
ㅇ. Strigoplus albostriatus E. Sim. (Text-fig. 1.)
S. albostriatus E. Sim. Bull. Soc. Zool. de France, 1885, p. 144.

Peltorhynchus rostratus Thorell, K. Sv. Vet.-Akad. Handl. xxiv. p. 2 (1891).

Prosoma.-(a) Clypeus nearly straight or very slightly recurved, with fuinge of stiff red hairs projecting forward slightly; notch on sides behind clypeus then swells out to $\frac{2}{3}$ and then inwards, ending in a truncation slightly narrower than width of clypeus. Thorax and caput cannot be separated except by colour. Clypeus and a triangle from outside eyes 4 to centre of cephalothorax is

Text-figure 1.


Strigoplus albostriatus E. Sim., $q$.
a. Prosoma from abore. b. Do. profile. c. Do. from in front. d. Sternum \&c. $e$. Opisthosoma from above. $f$. Do. from below.
light yellow (caput), remainder darker yellow-brown (thorax́). Caput has a still lighter fine line proceeding forward from apex of triangle and stopping just beyond line of 3.3 at a transverse line of stiff hairs similar to those on clypens. This line is slightly expanded into a dot immediately after its start. A similar light line crosses this at right angles between 4.4 , the two lines together forming a faint but distinct cross. Eyes 2 and 4 are on tubercles with a distinct blue tinge which is striking. Line centre to eye 4 is marked by two light dots similar to that on central line, and these dots form approximately the line of demarcation between the light and dark portions (caput and
thorax) of prosoma. There are also less distinct dots or streaks radiating from centre and marking other thoracic divisions. Dark portion is bordered by a thin white marking at hind corners, and there is a very thin darkening at outer edge. Cephalothorax is practically free from hairs except the bristle fringes and a very slight thin pubescence at edges.
(b) Clypeus slopes very gradually backwards and upwards with convex section, and on this view is equal in length to eye-cliff, its rise being very slight. Portion of face containing eyes 2 now rises vertically or rather slightly overhanging, and from here to centre of cephalothorax (which is well behind eyes 4) top is flat with slight rise; thence $45^{\circ}$ slope to rear. White marking is prominent at rear end and can be traced round to front as a fine white line. Eyes 2 and 4 are also prominent on side view.
(c) Clypeus slightly procurved and about $=$ eye 1 ; top convex, sides straight.

Cephalothorax has somewhat the appearance of a death's head.
Eyes.-1st row distinctly procurved.
1.1 nearly $=2 \times 1.2$, on slight tubercles of bluish tinge, o. u. f.
$2=2 \times 1$, largest of the 4 , on blue tubercle connected by valley with tubercle of 4 , the whole markedly blue, o. u. f.
$3=\frac{1}{2} \times 1$, smallest of all, 1 .
4 very slightly $<2$, blue most marked and tubercle most prominent, o. b. u.
2.3 very slightly $<1.1 ; 3.3=4.4$ approximately.

Total length of 2nd row greater than 1st. Trapezium 1.3.3.1 is narrower behind than before and approximately as wide as long.

Falces nearly horizontal, projecting forward and very prominent from above, broad at base and rounded, rapidly reducing to apex and curving slightly apart on inner side so that there is a distinct space between. Short tooth-like spines from about $\frac{1}{3}$ to apex, one on top near commencement being distinctly stronger than the rest. Lower side free from hairs. Groove indistinct and toothless. Onter margin has a thin scopula of moderate hairs.

Maxillce.-Long, nearly $=$ falces, broadest at base, slightly concave without and within round labium and tapering to a blunt point, greatest slope being on outer edge. Short spines all overlower side. Serrula on outer edge after concavity. Scopula strongest at angle but also slight on inner side.

Labium shaped like a Florence flask, length $=$ maxilla $=$ 3 breadth: blunt-pointed.

Palpi.-One missing, other broken after patella. Lightcoloured. stout, cylindrical.

Legs.-Mostly detached and damaged.
1st. One missing, other broken after femur. Light especially on top of $f$, which is marked with somewhat indistinct longitudinal series of white spots.
Proc. Zool. Soc.-1917, No. XX.

2nd. Two detached legs are probably 2nd. These have:-
f dark with distinct large white spot at centre and one at apical end on each side, and a fainter one at basal end on one (? both) sides. $p$ dark.
$\mathrm{ti}=\mathrm{f}=3 \mathrm{p}$, a little lighter and with white annulation about centre ; basal $\frac{1}{3}$ darker and <apical.
$\mathrm{m}<\mathrm{ti}$, dark at base, then a white spot followed by light end.
ta light, $<\mathrm{m}$, and distinctly lighter for basal half.
Claws 2, pectinated with about 5 teeth.
3rd. Only one remains. Much lighter, no distinct markings. Slight hairs thickest on $\mathrm{m} \&$ ta.
4th. Both missing.
There are three detached legs resembling 3 and three resembling 2 ; presumably, therefore, 3 and 4 are much alike and 2 and 1 , though the detached one is not much like the attached 1. In any case none has any spines, though all have considerable hairs on ti, $m$, ta. All joints are cylindrical except $f_{1}$ and $f_{2}$, which are slightly bow-shaped though not angular.

Sternum.-Broad, nearly an equilateral triangle, with fore side straight, sides slightly convex, and hind end a blunt point.

Opisthosoma.-Light and dark brown.
In front a slightly recurved narrow transverse white line with short central white line projecting back and rather indistinct returns at ends.

About middle a white line, whole width of abdomen, waved doubly at centre.

About same interval another straight line broken on each side of centre.

4th line wavy and shorter.
5 th shortest, just above spinners.
The darker brown is more or less bounded in front by the white line, light after 3rd.

Shape an amphora with spinners for neck. Sides have some more or less irregular white splashes or spots which bound lower surface ; a pair on each side of lung-sacs and a shortest pair at base of spinners are very marked.

Below, brown. Lung-sacs small, light, fairly wide. Epigastric fold marked, procurved.

Spinners.-1st barrel-shaped ; 3rd longest and thinner; all hunched.

Note.-Description from a single $q$ somewhat damaged, from Sungkei, found in company with ant no. 2. The prosoma and opisthosoma were separated and the legs were not measurable.

Prosoma 1.2 long $\times 1.2$ wide $\times 1.1 \mathrm{~mm}$. high.
Opisthosoma $2.0 \times 1.8 \times 1.4 \mathrm{~mm}$.
The prosoma is widest and highest at $\frac{2}{3}$, the opisthosoma widest at $\frac{1}{8}$, highest at $\frac{1}{2}$.

Total length estimated at 3 mm .
f. Amyciea forticeps O. P. Cambridge, 1873. ('lext-fig. 2.)

Amycla forticeps O. P. Cambr. P. Z. S. 1873, p. 122.
Amycicea forticeps Thorcll, Spid. Burm. p. 282.
Prosoma.- (a) From above truncated but slightly recurved in fiont, the same but slightly procurved behind, sides slightly convex, widest a little behind centre.
(b) Nearly as high as long, very convex, very steep in front to eye 2 , then slightly and convexly rising to highest point over eye 4 , then with a more gradual and very slightly convex slope to hind end.
(c) In front sides convex, subparallel, front edge slightly procurved. Clypeus=eye-space.

Colour reddish yellow, with a few black hairs on front edge and between eyes. Very faint traces of fovea immediately behind eyes and striæ therefrom.

Text-figure 2.

a


6


Amyciaa forticeps O. P. Camb., 오.
a. Profile. b. Prosoma from in front. c. Sternum \&c.

Eyes.-First row straight and subequally spaced, 1.1 being possibly very slightly $<1$. 2. 2 large on bluish tubercle $=4 \times 1$. 2 nd row strongly recurved so that 3.3 is well in front of 4.4 .

Quadrilateral 1.3.3.1 is very much wider behind than before. 3 considerably $<1$.

Quadrilateral 2.2.4.4 slightly wider thån long, a rectangle. 4 large on blue tubercles but slightly $<2$.

Falces not longer than clypeus, slightly stouter at base than apex, which is cut square. On side view rather more tapering. Unguis small. A weak scopula below unguis, and inner sides of falces with short, dark, stiff hairs in a regular row, longest at, unguis.

Maxillce. - Narrow at base, at first parallel then curving inwards to rounded points facing each other in front of labium. On inside curves closely round labium. Serrula from well on outer side round end to point, very weak. Scopula very weak just inside point.

Labium.-Length $=\frac{2}{3}$ maxilla. Breadth $<\frac{1}{2}$ length. Sides slightly constricted immediately after base and then convex to a round point.

Palpi.-Spring from base of maxilla. All joints cylindrical. f much longest, $>c_{1} ; p$, ti, ta increasing in length, but all short; ta has a single simple claw.

Legs.-2.1.4.3, with 2 and 1 practically equal and marked differences between the others. All are cylindrical except coxæ, which are rather rectangular on section. Proportions of joints much the same in all, f, ti, m, ta being in decreasing order with $m$ about $\frac{1}{2}$ ti or 2 ta. Femurs of 1,2 , and 4 have a weak short spine above near apex, otherwise there are no spines. Tarsi have two claws, pectinated, with more teeth on one than the other ; teeth close together and extending threughout.

Sternum.-Shield-shaped, cut straight and broad in front, and with a short point behind. Nearly as broad as long. $c_{1.1}$ whole width of stermum, $\boldsymbol{c}_{4.4}$ close but not in contact.

The colour of the prosoma including appendages is a dull orange-yellow.

Pedicel.-Moderate, distinctly visible from above, slightly tapering forward, single-jointed, covered at top with a long narrow lorum. Nearly white.

Opisthosoma.-Length nearly $=2$ width or height. Somewhat flask-shaped from above, distinctly widest at $\frac{2}{3}$. Light grey or mouse-colour, with two longitudinal sets of white spots, rather irregular in disposition, proceding from front to widest place and spreading outward. These terminate each in a large black spot.

Below plain. Lung-sacs very dark and wide apart. Epigastric fold distinct.

Epigyne.-Rosette-shaped. Not noticeable.
Spinners.-All short; 1st and 3rd pair making a rectangle considerably broader than long; 2nd pair between 3rd, so that 3.2.2.3 is a straight line. All spring from sockets in a common projection, all 2nd joints very small.

1st stout barrel-shaped. 2nd shortest, cylindrical, thinnest. 3rd cylindrical, intermediate.

Anus.--Tubercle rather broad and thin, nearly as high as 3rd spinners.

Note.-Description is from a single $q$ dropped from a tree in the jungle at Biserat.

The following are the measurements :-
Prosoma $\ldots . . . . . . .2 .0 \times 1.5$ wide $\times 1.6 \mathrm{~mm}$. high.
Opisthosoma ...... $2.7 \times 1.8$, $\times 1.9$,
Palpus ................ 1•4.

$$
\begin{aligned}
& \text { Legs.-1 } \ldots \ldots \text {... c+tr } 0 \cdot 6 \text {, f } 2 \cdot 2, \mathrm{p}+\mathrm{ti} 2 \cdot 2 \text {, } \mathrm{m}+\mathrm{ta} 2 \cdot 2=7 \cdot 2 \\
& 2 \ldots . \quad, \quad 0 \cdot 6,, 2 \cdot 2, \quad, \quad 2 \cdot 2, \quad, \quad 2 \cdot 3=7 \cdot 3 \\
& 3 \ldots . .,<0 \cdot 6,, 1 \cdot 5, \quad \mathrm{p}+\mathrm{tr}+\mathrm{m}+\operatorname{ta} 2 \cdot 4=4 \cdot 5 \\
& 4 \ldots \ldots . \quad \text { < } 0 \cdot 6,1,1 \cdot 1, \quad 3 \cdot 7=5 \cdot 4
\end{aligned}
$$

Ant accompanying, none.
Epidius Thorell.
$0^{3}$. Epidius longipalpis Thor. (Text-fig. 3.)
E. longipalpis Thor. St. Rag. Mal. i. 1877, p. 152.

Prosoma.-(a) Caput trimeated or very slightly convex in front, swells out slightly and concavely at sides to thorax, which is much wider and rounded at sides and slightly concave at rear. Caput is cut off above by strong strix, and there is a deep fovea and thoracic strix. Caput has a central longitudinal indentation from fovea to 2 nd line of eyes. Colour dirty brown, lighter at indentations and rear of thorax.
(b) Clypeus vertical, gradual slope up from 1st eyes to midthorax, then more abrupt slope to end.
(c) Clypeus nearly $=$ face, very slightly procurved. Caput convex above and at sides, thorax convex at sides and flattened, above.

## Text-figure 3.


a. Prosoma from above. b. Do. from in front. c. Sternum \&c. d. Tarsus. e. Palpus.

Eyes.-1st row recurved, $1.1=1.2,1=\frac{1}{3} 2$. 2nd row recurved as viewed from above but less so than 1st row, slightly procurved as viewed from in front, considerably longer than 1 st. 3.3 very slightly $>3.4,4$ very slightly $>3$.

Trapezium 1.3.3.1 longer than broad and nearly twice as broad behind as before.

Falces.-Vertical or very slightly sloped forwards, parallel
sides with very oblique long truncation, groove distinct. Upper margin, one small, tooth at angle with one smaller above it, and one or more very small below. Lower margin, one tooth half way to angle and two at angle, one of which is fairly large; these two may, however, be really one with two cusps. A strong and long scopula of light hairs on outer margin.

Maxilla.-Moderate, length $=1 \frac{1}{2}$ breadth, subparallel, being slightly wider in front than at base. Outer apex rounded, inner obliquely truncated with scopula. Serrula from well before outer rounding to truncation.

Labium.-Length $>\frac{1}{2}$ maxilla, broader than long, strongly barrel-shape.

Palpi.-Remarkably long $=$ about $\frac{2}{3} \operatorname{leg} 4$. Tr simple, much broader than long, breadth $=$ nearly least widtl maxilla; f length $=$ prosoma, cylindrical, slightly $S$ curved ; $p$ very short, $<\frac{1}{6}$ ti ; $\mathrm{p}+\mathrm{ti}>\mathrm{f}, \mathrm{ti}<\mathrm{f}$ and slighter, S curved; four stnut bristles at lower apex pointing directly forward and reaching beyond base of fovea; a short sharp apophysis pointing directly forward at lower outer apex. Tia a little $>$ p, very short, subelliptic, with blunt point and fovea occupying about half of it. Organs have largish but flat bulb ending in blunt-pointed extension forward. Style springs from centre and points forward over extension of bulb, ending in a sharp black spine-like point.

Legs.-Only 1st and 3rd on one side remain, 1st being much stronger and about twice as long as 2 nd .
1st. c length $=$ nearly 2 breadth.
tr, a few short dark hairs at ridge, fore section distinctly <aft.
f, 2 or 3 spines at top in longitudinal row, a very few smaller at side.
$p=\frac{1}{6}$ ti, hairless.
ti slightly curved, slenderer than f; 3 or 4 spine pairs and a few spines along upper sides.
m nearly $=$ ti, two spine pairs below but stronger and a few at sides.
ta $=\frac{1}{3} \mathrm{~m}$, hairless, 2 claws with 5 teeth and fasciculus.
3rd. General proportions as 1st, but much shorter and f stronger. Spines on back of $f$ and $p$, others as 1st.
Sternum.-Cordiform, as broad as long, very smooth, front cormers rounded, rear point rounded. $c_{1.1}=$ full width of sternum. $c_{4.4}=$ width of $c_{4}$.

Pedicel.-Short and stout, with a darker narrow lorum above.
Opisthosoma.-Very much damaged, but appears to be almondshaped from above, with two or more pairs of spots in a longitudinal series at the fore part above. On a side view very high in front, rising vertically or with a slight overhang from perlicel and falling with a straight slope to spinners.

Spinners compact, short. 1st stout at base, tapering, 2jointed. 2nd slender, longer, cylindrical. 3rd in shape and proportions between 1st and 2 nd .

Anal tubercle.-Wide and noticeable.

Note.-Description is from a much damaged ${ }^{*}$ specimen from Biserat, Jalor, in company with the Salticid spider Myrmarachne biseratensis of $\&$ and three ants of species 2 and 17.

The following measurements were taken :-
Prosoma
1.7 long $\times 1.7 \mathrm{~mm}$, wide.

Opistliosoma ...... $2 \cdot 0$ or longer, damaged.
Palpi $\ldots .$. . f $1 \cdot 8, \mathrm{p}$ very short, $\mathrm{p}+\mathrm{ti} 2 \cdot 0^{\circ}=$ abt. $4^{\circ} 0$.
Legs.-1 ...... $\mathrm{c}+\mathrm{tr}+\mathrm{f} 3 \cdot 6, \mathrm{p}+\mathrm{ti} 3 \cdot 9, \mathrm{~m}+$ ta $4 \cdot 0=11 \cdot 5$ $3 \ldots \quad, \quad 2 \cdot 0, \quad, \quad 2 \cdot 0, \quad, \quad 1 \cdot 9 \quad=5 \cdot 9$

Salitidide.
Myrmarachne Macleay, 1839.

## ㅇ. Myrmarac qine maxillosa C. L. Koch. (Text-fig. 4.)

T'oxeus maxillosus C. L. Koch, Die Ar. xiii. p. 19, tab. cecelxxvi. fig. 1090.
Synemosina procera Thor. Ann. Mus. Genov. x. p. 538 (1877).
T'oxeus procerus id. ibid. xxv. p. 346 (1887), xxxi. p. 220 (1892).
Salticus modestus id. Ann. Mag. Nat. Hist. ser. 6, ix. p. 235 (1892), $q$ jun.

T'oxeus maxillosus id. Spid. Burm. 1895, $q$.

## Text-figure 4.



Myrmarache maxillosa C. L. Koch, $q$.
a. Profile. b. From below.

Prosoma. - Length $=$ patella + tibia of 4th leg, slightly longer than opisthosoma. Greatest breadth and greatest height each nearly $\frac{1}{2}$ length. Caput $=$ or very slightly < thorax. Front wall straight or very slightly recurved and stepped back at eye 2. Side walls straight or very slightly convex. Back wall somewhat procurved as it slopes down to the groove, where the cephalothorax
is narrowed above but not at base. Thorax swells out again behind groove towards width of caput, being strongly rounded, and terminates in a truncated or even slightly hollowed end of about half greatest width of thorax.

Clypeus very low, top of caput flat and sloping very slightly upward to eye 4 , over which it is convex. Groove is very shallow, hardly reaching as low as bottom of eye 4 . Thorax rises very slightly behind it, and then falls with an even but slightly convex slope to rear end, where it rises concavely into a rim which can be traced along sides to caput.

Colour dark mahogany, with black eye-frame broken in front of eye 4 and terminating just below the level of eyes 2 and 4. Scanty short grey hairs all over (Text-fig. 4, a.).

Eyes.-1st row straight by summits. 1.1 in contact, 1.2 close but not in contact. $2=\frac{1}{3} 1$ and slightly behind it. $4=$ or very slightly $>2.3<\frac{1}{4} 2$, very slightly nearer 2 than 4 and on the upper tangent to 2 and 4 . Eye square slightly broarder than long, with eyes 4 projecting prominently at hind corners and 4.4 very slightly $>2.2$ and $>$ distance between itself and rim of cephalothorax.

Falces.-Very nearly as long as caput. Length $>2$ breadth. Project horizontally forward. Sides subparallel, with inner edge straight to about $\frac{2}{3}$ and then rounded off to base of margins, outer edge very slightly convex. On side view straight at lower edge, upper edge strongly convex making falx very much thicker at $\frac{1}{3}$ to $\frac{1}{2}$ than elsewhere. Unguis $=\frac{1}{2}$ falx, sickle-shaped with base much thicker than tip and curve with a tendency to being straight in the middle with angle inside near base. Groove is marked. Upper margin has typically 8 teeth, of which the first three are close together at base of unguis, increasing rapidly in size from 1 very small to 3 large, $4-6$ are large teeth, 7,8 rapidly decreasing till 8 is very small. $4-8$ evenly spaced. 1. and 2 and 8 are sometimes missing. Lower margin has 8 to 10 or more very small teeth close together and reaching from base of unguis to a little beyond angle, but always terminating before the upper ones. They or at any rate the middle ones are alternately large and small. There is a strongish scopula of long grey hairs on upper margin, largest at angle, and of short dark scanty hairs on lower margin.

Colour dark mahogany as cephalothorax. The falces are glabrous and somewhat rough.

Maxillce.-Length $=$ coxa + troch. of 1 st $=$ falx nearly. Outer edges parallel from base to apex of labium, then still remain straight but incline slightly outwards. Outer corner is well rounded and end square, a serrula following the edge from about middle of outer side to end of straight portion. Inner corner very slightly rounded and truncation straight and nearly parallel axis runs back more than half way to labium. Hence slopes slightly ontwards and follows labium back to base, being hollowed out to enclose it. Truncation has a strong scopula of black hairs which
is extended towards labim and also outwards to imner angle at termination of serrula, where hairs are grey and as long as widih of maxillia.

Width at end = lahium. Coluur light mahogany except for outer edge, which is as dark as cephalothorax.

Labium.-In length $\frac{2}{3}$ maxilla, terminating half way up it. Breadth $\frac{1}{3}$ length. Hapers very slightly from base to apex, which is square. Sides straight. Apex has a scopula of dark hairs. Colou as dark as outer portion of maxilla except for apex, which is light.

Palpi.-Spring from near base of maxilla. Trochanter length =width maxilla. Dark brown except for light yellow on inner basal side. Femur $>$ half length of caput, flattened, narrow at both ends where its width $>\frac{1}{3}$ length. Patella $<\frac{1}{3}$ femur, wedge-shaper, broadening at apex from narrow base. Tibia broadens from base to apex, where it is twice width of patella apex. 'Tarsus slightly longer than patella, with rounded point. Tibia and tarsus together form a lanceolate plate, glabrous below, nearly twice femur in length, with strong fringes of hairs on both sides and round point. All joints except patella have short grey hairs on back. General colour dark brown-green, except as mentioned for trochanter. Total length of palpus where extended $=2$ falx, the basal end of tibia being about level with apex of falx.

Legs.-Order 4.1.3.2, with 4 and 1 practically equal and likewise 3 and 2. In the lst leg patella + tibia and in the 4 th metatarsus + tarsus are notably long compared with the other legs.
1st. Coxa length $=2 \frac{1}{2}$ brcadth, very slightly tapering, light yellow except for brown patch at lower onter vertex.
Trochanter $=\frac{1}{4}$ coxa, narrower, light yellow except for continuation of coxal brown patch strengthened.
Femur strongly clubbed at base, < patella + tibia $>$ tibia, dark except below at apical end.
Patella $>\frac{1}{3}$ tibia, slightly curved downwards. No spines. Dark at sides, light above and below.
Tibia. Has normally 7 spines on the inner and 6 on the outer side below, but there are frequently 6 pairs. The spines' are evenly spaced from base to apex, but the largest are in the middle and they get rapidly shorter, so that the apices of the last 3 or 4 are all about level near the end of the joint. Dark at sides, light above and below.
Metatarsus > patella, with two pairs of strong spines longer - and stronger than those of tibia, the last of which reach to beyond the middle of tarsus. Dark.
Tarsus $<\frac{1}{2}$ metatarsus, with claw-tuft and 2 claws.
2ud. c equally broad and long, swollen near base, $<\frac{1}{2} \mathrm{c}_{3}$. Dark brown with a touch of light at apex.
tre short $=\frac{1}{3} \mathrm{c}$, cylindrical, brown with light patch below.
f slightly clubbed at base, brown with light below at apex.
$\mathrm{p}=\frac{1}{8}$ ti, curved downwarls, no spines. Light above and below, dark sides.
ti. 3 pairs of feeble spines evenly spacerl, with a 4 th pair extremely short and feeble at extreme apex often missing. Light above and below, dark sides.
$m>\frac{1}{2}$ ti. 2 spine pairs si ronger than on $\mathrm{ti}_{2}$ but much weaker than on $\mathrm{m}_{1}$, basal is largest, apical only just reaches ta. Light above and below, dark at sides.
$\mathrm{ta}<\frac{1}{2} \mathrm{~m}$. Light.
3rd. c a little larger and more cylindrical than 2 nd c , brown.
tr short, cylindrical, brown.
f brown, slightly clubbed at base.
p short, curved downward, brown except for light patch above at basal end.
ti brown except at tip where light above.
m nearly $=$ ti, light above and below, brown sides.
ta $>\frac{1}{3} \mathrm{~m}$, light.
4th. $\mathrm{c}>\mathrm{c}_{3}$ but not more than $\frac{2}{3} \mathrm{c}_{1}$, cylindrical, brown.
tr larger and a little slenderer than $\mathbf{c}$, cylindrical, light.
f long and slightly clubbed at base, brown.
p as $\mathrm{p}_{3}$.
ti brown throughout, slender.
$m$ very long, nearly $=t i$, slender, brown except for very small lighter patch at upper apical end.
$\mathrm{ta}=\frac{1}{4} \mathrm{~m}$, light above and below, dark at sides.
In general appearance the posterior legs are much darker than the anterior, and the light (almost white) 1st c and tr and 4th tr are very noticeable.

Sternum.-Lanceolate, short-pointed between $c_{1.1}$, which are $\frac{1}{4}$ their width apart. Widest from $\mathrm{c}_{1.2}$ to $\mathrm{c}_{2.3}$, thence tapering to a long point in front of $c_{1,4}$, which are in eontact. Sides undulate to accommodate coxæ but do not run into points between them. Broad for the genns, being $>$ width of middle coxæ. Gaps $\mathrm{c}_{1.2}$ and $\mathrm{c}_{2.3}$ about equal and not materially greater than $c_{3.4}$. Colour mahogany, lighter than coxe 2, 3, 4. (Textfig. $4, b$.)

Pedicel.-Short but visible from above. First joint covered by brown plate overlapping second. Second joint longer and covered by longitudinal narrow plate. Whole length of pedicel not greater than its w dth. It is received into a short projecting socket in abdomen.

Opisthosoma.-Egg-shaped from above, widest about $\frac{2}{3}$ back. From side overhangs in front and about same level for first $\frac{2}{3}$. Above, general colour a dark green-brown. Below, general colour the same but coarser, and at sides distinctly composed of darker lines separated by light spaces. Lung-sacs very wide apart and dark red-brown, space between around epigyne lighter red-brown. A smoother and darker longitudinal band from epigastric fold to spinners, slightly wider at spinners.

Epigastric fold procurved.

Epigyme.-A pair of white oval spots with a darkish mahogany bridge between expanded at both ends. The whole on a ground of the same colour. (Text-fig. 4, b.)

S'pinners.-1st stout, subconical, light green-brown. 2nd very thin, white, slightly longer than lst. 3rd a little stouter and darker than 2url, much thimer than 1st, slightly longer than 1st.

All have 2nd joint very much longer than 1st.
Anus ou a tubercle of two joints.

## Short Description.

ㅇ. Prosoma $=$ opisthosoma. $\quad$ Caput $=$ thorax. Groove very slight, with thorax not rising appreciably behiud.

Falces project horizontally forward, nearly as long as caput, giving the appearance of $\delta$. Teeth, upper 8 strong at centre, subevenly spaced; lower 8 small, alternate sized, close.

Legs 4.1.3.2, with 4 and 1,3 and 2 nearly equal pairs. $c_{1}$ and $\mathrm{tr}_{1}$ and $\mathrm{tr}_{1}$ are very prominently white. Ti, has 6 spine pairs or more often 6 and 7 spines, $m_{1} 2$ pairs., $p_{1}$ none, $p_{2}$ none, $\mathrm{ti}_{2}$ 3 pairs, occasionally a 4 th, $\mathrm{m}_{2} 2$ pairs stronger than on $\mathrm{ti}_{1}$.

Sternum rather broad. Gap $c_{2.3}$ not $>$ others.
Pedicel short but visible from above.
Opisthosoma squat, much thicker than usual in the genus.
Note.-Description based on 13 와 from Biserat, K. Mahek, c. Patani. It was founcl practically everywhere and is much the commonest.

ㅇ. The of is possibly M. biseratensis.
Length varied from 3.5 (imm.) to 7.0 mm ., the normal length being 5 to 7 .

The accompanying ants were numbers 1 and 2 .
Legs of a specimen, 오:-


Legs of another specimen, length $6 \cdot 0$, 오:-


Myrmarachne cornuta, sp. n. (Text-fig. 5.)
ㅇ. Prosoma.-(a) Length $=$ opisthosoma. Greatest breadth very slightly > greatest height and each nearly $\frac{1}{2}$ length. Caput $=$ thorax. Front wall straight, slightly stepped back to eyes 2 . Side walls slightly convex. Rear wall procurver where it slopes back to groove where p.s. is narrowed above but not at base, though white wedge makes it look as if strongly constricted. Thorax swells out again behind groove to width of caput and then narrows with straight or almost concave edges to base,
which is cut nearly straight and about $\frac{1}{3}$ greatest width of thorax.
(b) Clypeus very low. Caput slightly convex. Groove shallow and broad. Thorax rises behind it to nearly height of caput and then falls with convex and concave slopes to rim, which is slight but can be traced round to caput.

Colour mahogany moderate to dark, with black eye-frame broken in front of eye 4 and terminating just below the line of eyes 2 and 4 . In dark species this frame is hard to distinguish. Thorax a shade lighter than caput. Between the two on each side a wedge of white hairs broadest below.

a. §: Profile. b. §: Right falx from below, unguis omitted; c. Do. from above.
d. ठ : Right palpus from below. e. ㅇ, Epigyne.

Eyes.-1st row procurved by summits. 1.1 subcontact, $1.2>1.1$ but very close. $2>\frac{1}{3} 1$ and slightly behind it. $\quad 4=2$. $3<\frac{1}{4} 2$ and very slightly nearer 2 than 4 and on the upper tangent to 2.4. Eye square broader than long and 4.4 distinctly $>2.2$ and much $>4$-rim. Eye 4 projects over edge of prosoma but not at all prominently so, and the prosoma is not convex over it in either view.

Falces.-Length $<\frac{1}{2}$ caput $=1 \frac{1}{2}$ breadth, nearly vertical with slight forward slope. Outer edge convex, inner more markedly sloping inwards from about $\frac{3}{7}$ to root of unguis. On side view strongly convex above with almost an angle at $\frac{1}{3}$ so that basal portion is horizontal and apical nearly vertical; straight or very slightly convex below. Unguis regular curve and regular diminution in thickness from base to apex. Teeth on upper margin 5 or 6 , of which 3 above angle evenly spaced and of
moderate size, others below angle and smaller. Lower teeth 7 or 8 , close, about same size from end to end, but alternate ones possibly smaller. Long thickish light scopula largest at angle on outer margin. A few long dark hairs along lower margin.

Colour mahogany lighter than cephalothorax. Unguis at base darker, at apex lighter than paturon.

Maxillce.-Length $>c_{1}$, nearly $=$ falx. Narrow at base, outer side curving strongly and concavely outwards beyond labium to hold rounded corner, truncation shortish and at about $45^{\circ}$ with axis of body. Inner side slopes outwards from truncation, being strongly hollowed in front of and at side of labium. Dark serrula from outer corner to angle. Light scopula along truncation. Width at base $=\frac{1}{3}$ labium, at end $>$ labium.

Colour mahogany, markedly lighter at inner end.
Labium.-Length $>\frac{1}{2}$ maxilla. Breadth at base $>\frac{1}{2}$ length. Sides parallel at base, slightly inclined towards each other at apex, which is cut off square and has thin scopula of dark hairs. Colour darker than darkest part of maxilla except at apex where light.

Palpi.-Spring from close to base of maxilla. Trochanter $<$ width of maxilla. Femur $=\frac{1}{3}$ caput, flattened, reduced at ends, greatest width $=\frac{1}{3}$ length. Remainder as M. maxillosa.

Colour $=$ caput with end joints darkest.
Legs.-Impossible to measure lengths.
1st. Proportions as maxillosa except patella $=\frac{1}{2}$ tibia. Patella has 1 spine below towards outer side. Tibia 4 spine pairs, subequally spaced and nearly of equal size but with basal slightly the greater. Apex of last spine just reaches end of joint. Metatarsus 2 spine pairs, basal strongest and somewhat stronger than tibial, apex slightly beyond end of joint.

Colour very light throughout except small dark splash on outer side of trochanter and larger dark splash towards outer basal end of femur and slight darkening on outer side of metatarsus. In a light specimen all these dark markings are absent or merely shades.
2nd. c nearly as broad as long, markedly swollen on inner side about centre.
$\operatorname{tr}=\frac{1}{3} \mathrm{c}$, barrel-shaped.
f slightly thicker at base than apex, $>$ ti $<p+$ ti.
$p=\frac{1}{3}$ ti, ti 2 spine pairs. $m=p, 2$ spine pairs.
Colour light throughout except strong dark longitudinal marking on outer sides of c and tr.
3rd. Proportions as far as patella $=$ maxillosa. Dark brown c to f, light beyond.
4th. $\mathrm{c}>\mathrm{c}_{1}$, cylindrical or very slightly wider at base.
tr $=\frac{2}{3} \mathrm{c}$, slightly barrel-shaped, both these joints are brown with longitudinal light centre line below.
f brown, slightly thicker at base.
Remainder missing.

The white or very light yellow anterior legs are very noticeable, as also the proportions of $\mathrm{c}_{4}$ and $\mathrm{tr}_{1}$.

Sternum.-Sharply but shortly pointed between $c_{1.1}$ which are in subcontact, short-pointed at sides between $\mathrm{c}_{1.2}$ which are close, curves cut strongly between $\mathrm{c}_{2.3}$ which are wider, narrows again before $c_{3}$ and then proceeds with straight parallel sides to $c_{4}$, in front of which it ends in a moderately long point. $\mathrm{c}_{4.4}$ in contact. At widest sternum about $=\mathbf{c}_{2}$. Colour dark mahogany.

Pedicel.-Length > caput. 2nd joint considerably longer than 1st (as seen from above $j_{2}=2 j_{1}$ ). 1st plate broader than 2nd and procurved behind. Pedicel received into very short projecting socket of opisthosoma.

Opisthosoma.-Subcylindrical with constriction at $\frac{1}{3}$, widest at $\frac{2}{3}$, pointed at spinners. Dark green-brown above, with white marking at constriction starting at top of sides and widening below. In front of epigastric fold and behind the white marking colour is as above. Epigastric fold straight; lung-sacs wide apart and dark.

Epigyne.-An equilateral triangle with base along epigastric fold and vertex forward. Edges red, inside white, with central darker kridge and darkest spots at its edges. Not very distinct but more characteristic than others of the genus. (Text-fig. 5, e.)

Spinners.- Proportions as maxillosa. All a light brown colour.

0 . The chief differences from $q$ are:-
Prosoma.-Cephalothorax $=\frac{3}{4}$ abdomen. Groove sharper at bottom and thorax does not rise so much behind it, so that it is considerably below caput and general shape not unlike muxillosa. Rim as well as wedge has grey hairs.

Falces $=$ cephalothorax. From above inner edge straight at first, apical half concave, outer edge convex. Width $=\frac{1}{6}$ length. End cut off square, with strong concavity and very strong toothlike projection forward and inward from inner angle, with blunt end. From side falces project straight forwards, with upper and lower edges almost parallel, granulated.

Groove not well defined. Upper margin has 6 teeth. 1st smallish close to base of unguis, remainder subequally spaced over basal half of falx, $2-5$ heing very large, 6 small $=1$. Lower margin has 9 teeth, mere dots subequally spaced.

Unguis darkest and strongest at base, S curved with slight swelling of tip-curve. Length $=$ paturon. $\quad$ (Text-fig. 5, $b, c$. )

Maxillce. - Rather straighter outer edge and stronger serrula.
Palpi.-Trochanter $=$ width maxilla. Femur $=\frac{1}{3}$ caput, less flattened than in ㅇ. Patella < trochanter, curved downwards; from above, sides almost parallel, apex distinctly wider than base. Tibia length $=$ patella, much wider at apex. A very small blunt process on outer apical corner visible from below. Some longish hairs on inner side. Tarsus longer and broader than tibia, oblong, with short hairs on inner side. Fovea reaches to
about $\frac{2}{3}$. Organs have a black spine springing from near inner apical end, encircling fovea outwards and backwards and terminating in a fine point pointing outwarts at about middle of apex after completing somewhat more than a circle. ('lext-fig. 5, d.)

Legs. -4 considerably $>1 ; 3$ missing but up to $\mathrm{f}=2$. Generally as $\circ$ except that in 2 anterior pairs there are strong black lines along sides of joints which are much strongest in femurs, and the white centre lines of $c_{4}$ and $\mathrm{tr}_{4}$ occupy the whole of the lower side, and ti ${ }_{2}$ has 3 spine pairs instearl of 2 .

Opisthosoma.-Abdomen longer and narrower. Width $=\frac{1}{4}$ length. White marking at constriction only at sides. Above and below central brown coriaceous lines rumning nearly the whole length of the body.

## Short Description.

Cephalothorax $=$ abdomen in $P=\frac{3}{4}$ abdomen in $\sigma^{*}$. Caput $=$ thorax, moderately high, with broad but shallow groove and thorax lower. Strong white-haired wedge at sides of groove, and of white hairs along rim.

If falx: upper teeth 5 or 6 , subevenly spaced, 3 above angle, moderate, remainder small; lower 8 or 9 , close, small.
o falx $=$ cephalothorax, subparallel edges, inner concave near apex and terminating in strong bow. Unguis, $S$ curve, slight swelling near point, = paturon. Upper teeth 1 at base of unguis, 5 evenly spaced over basal half, of which $2-5$ very strong. Lower 9 dots evenly spaced with dark ridge at base.

Sternum nariow, lounded between $c_{2.3}$, short points in front and between $c_{1.2}$, longer point behind, $c_{1.1}$ about $\frac{1}{4}$ their width apart.

Legs.-First 2 pairs white, black side-lined in os. Posterior dark with $\mathrm{c}_{4}$ and $\mathrm{tr}_{4}$ dark below, $\mathrm{c}_{4}>\mathrm{c}_{1}$, $\operatorname{tr}_{4}=\frac{2}{3} \mathrm{c}_{4}$. Order 4.1 (2.3?). $p_{1} 1$ spine below towards outer side, ti, 4 spine pairs, $m_{1} 2$ spine pairs, ti $i_{2}$ \& 2 spine pairs ( $\delta 3$ ), $m_{2} 2$ spine pairs.

Perlicel: 2nd joint notably longer than 1st.
Abdomen cylinhrical, narrow, gently constricted at $\frac{1}{3}$, with white oblique lines down side, in $\frac{q}{}$ extending helow. ot has brown longitudinal centre above and below.

Epigyne an equilateral triangle.
o palpus: very small process at onter apical angle of tibia. Organs are encircled by a black spine pointing outwards at centre of apex.

General colour of prosoma dark mahogany with even darker eye-frame, of opisthosoma dark grey-brown.

Note.-The description is based on $1 \delta^{*}$ and 2 , one of the latter being much lighter in colour. The $\delta$ and this $ㅇ$ were both found at Bukit Besar, alt. 2500 ft ., on tree-tronk 35 ft . from ground on 6 Sept. 1901 : the other of at Bukit Besar.

Ants accompanying, nos. 12 and 16 .

The following measurements of the $\delta$ were taken:-
Length 8.0 mm ., p.s. $3 \cdot 1 \times 2 \cdot 0 \times 2 \cdot 0, \quad$ o.s. $4 \cdot 0 \times 1 \cdot 0$.

No mensurements of 아 legs were obtainable; total lengths of the two o 5.8 and 5.0 mm .

Myrmarachne turriformis, sp. n. (Text-fig. 6.)
ㅇ. Prosoma. - (a) Length considerably $>p+$ ti of 4 th $=$ $\mathrm{p}+\mathrm{ti}+\mathrm{m}+$ ta of $3 \mathrm{rd}=2 \frac{1}{2}$ width $=2 \frac{1}{2}$ height. Caput $<$ thorax.

Front wall of caput straight or very slightly recurved, and stepped back at eye. Side walls straight. Back wall procurved

Text-figure 6.


Myrmarachne turriformis, sp. n.
a. $\boldsymbol{\delta}^{\boldsymbol{\delta}}$ : Profile. b. $\boldsymbol{\delta}^{\boldsymbol{\top}}$ : Sternum. c. $\bar{\delta}$ : Left palpus from below.

> d. ㅇ: Epigyne.
as it slopes down to groove, which is narrowed above but practically full width at base. Thorax straight behind groove with slightest undulations to $\frac{2}{3}$ where it narrows with straight edges to end, which is cut nearly straight and $\frac{1}{3}$ to $\frac{1}{2}$ width of thorax.
(b) Front wall straight. Caput slightly convex and distinctly sloping upwards from eye 2 to 4 , well rounded and steeply sloping to a broad groove, top of which is generally only about $\frac{1}{2}$ height of caput. Thorax rises slightly behind groove to $\frac{1}{4}$ where it is
much lower than caput, and then with convex and concare slope to hind rim, which is weak but can he tracell well towarls caput.

Colour mahogany, slightly darkest on caput, which has black eye-frame sub-broken in front of eye 4 and terminating just below the line of eyes 2-4. Slight indication of grey-haired cephatic wedge.

Clypeus very low.
Eyes.-1st row straight or very slightly recurved by summits. 1.1 subcontact, 1.2 considerably $>1.1,2=\frac{1}{3} 1$ and behind it. 2.3 very slightly $<3.4$. Eye square much broader than long and 2.2 distinctly $>4.4>4$-1im. 4 projects over edge of prosoma but not at all prominently, and the prosoma is not convex over it on either view.

Falces - Length $<\frac{1}{2}$ caput $=2$ breadth. Edges parallel, truncation somewhat shor't and square. Groove marked. Unguis light, with regular curve and regular diminution from base to apex, not very strong, lengtl $=\frac{1}{2}$ patmon. Upper teeth 5 to angle, not quite in contact, with 1 or 2 dots wider spaced below. Lower teeth 6, as strong as upper, close, largest in centre, but no great difference in size.

Maxillce.-Length $=c_{1}=$ falx. Narrow at base, outer erge curving strongly and concarely ontwaids beyond labium to bold rounded corner. End square, truncation shortish, steep with strong light scopula, longest at apex. Inner edge slopes ontwards from truncation, being strongly hollowed in front of and at side of labium. Dark serrula from about middle of outer edge to angle. Colour light.

Labium.-Length $>\frac{1}{2}$ maxilla, parallel sides, cut off square at end, a little darker than maxilla except at end. A slight dark scopula at truncation.

Palpi.-Spring from near base of maxilla. Trochanter length $=\frac{1}{2}$ maxilla. Femur $<\frac{1}{2}$ caput, flattened, breadth in centre $=\frac{1}{3}$ length. Patella narrow at base, broad at end. Tibia $=1 \frac{1}{2}$ patella, at base $=$ width patella, at apex very much wider. Tarsus $=2$ tribia. The tibio-tarsus plate a little $>$ femm, with inner fringe rather short. Colom = labium, with hairy parts of tibio-tarsus browny green.

Legs.-4.1.3.2, with marked steps between each.
1 st. e white, length $<2$ breadth, very slightly tapering.
tr white, cylindrical, length $=$ breadth $<$ least width of c , faint.
f light yellow, lightest at apex, dark-lined on outer side, length $>2(c+t r)$, clubbed at base.
$p=\frac{1}{3}$ ti, light, thin dark line each side, 1 spine pair below.
ti $=\mathrm{f}$, coloured as p, 5 spine pairs evenly spaced and about equal strength.
m light, dark-lined on side, 2 spine pairs in basal half, at least as strong as ti spines, last reaching well on to ta.
$\mathrm{ta}=\frac{3}{6} \mathrm{ti}$, light, $\mathrm{m}+\mathrm{ta}=\frac{2}{3}(\mathrm{p}+\mathrm{ti})$.
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2ud. c white, length $=\frac{2}{3} \mathrm{c}_{1}>$ breadth, considerably stouter at base.
tr as tri.
f light, slightly clubbed at base, $>2(\mathrm{c}+\mathrm{tr})$.
$p=\frac{1}{4}$ ti, light, faint dark side-lines.
ti $<\mathrm{f}$, light with dark side-lines, 3 spine pairs evenly spaced nearly as strong as on tia .
m slightly $>$ ta, light, 2 spine pairs nearly as strong as on ti. ti light, ti + ta slightly $<$ ti.
3 rd . c brown, cylindrical, $>\mathrm{c}_{2}$, length $=2$ breadth.
$\mathrm{tr}=\frac{1}{2} \mathrm{c}$, brown, length slightly $>$ breadth, slightly wider at apex than base.
$f$ lighter brown, $=f_{2}$, very slightly clubbed at base.
p brown, light at base, $<\frac{1}{3}$ ti.
ti light with dark lines at sides, $\mathrm{p}+\mathrm{ti}>\mathrm{f}$.
m \& ta light, $\mathrm{m}+\mathrm{ta}<\mathrm{p}+\mathrm{ti}$.
4 th. c light with dark above and sides, length $=2$ breadth, $>c_{1}$, very slightly wider at base than apex.
tr cylindrical, light with dark above and sides, nearly as long as c and much $>$ any other tr.
$\mathrm{f}=2(\mathrm{c}+\mathrm{tr})$, brown, very slightly wider at base than apex.
$p$ light with apex dark above, $=\frac{1}{6}$ ti.
ti light brown, $p+t i>f$.
ni lighter, nearly as long as ti, light.
ta $=\frac{1}{3} \mathrm{~m}$, light.
In general appearance the anterior legs are lighter than the posterior.

Stermum.-Truncated between $c_{1.1}$ and stoutly and bluntly pointed between $c_{1.2}$, spreads out into an advanced point between $c_{2.3}$, which are rather widely separated, a long point in front of $c_{4.4}$, which are in subcontact. Greatest width $>$ width of $c_{3}$, $c_{1.1}=$ nearly width of $c_{1}$. Colour mahogany, darker than any other part of prosoma. ('Text-fig. 6, b.)

Pedicel.-Slightly < caput; 1st joint brown, slenderer and very much longer than 2 nd, light with dark sides and front, very short, inserted into socket on opisthosoma.

Opisthosoma $=$ or very slightly $>$ prosoma. Breadth and height nearly $\frac{1}{2}$ length. Pear-shaped, widest at $\frac{1}{3}$. White belt at about $\frac{1}{4}$, distinctly in front of widest part. Lung-saes brown, wide apart, lighter brown rest in front of epigastric fold, which is slightly procurved. General colour brownish green.

Epigyne.-No distinct formation, but in some specimens a light circle with faint brown hridge ending basally in a dark bifurcate; general appearance is sometimes something like the ace of clubs. (Text-fig. 6, d.)

Spinners.-1st pair stoutest. Basal joint short, thick, light with dark longitudinal markings; 2nd joint larger, slightly barrel-shaped, thinner. 2nd pair white, thinner. 3rd pair darker than 2nd, end joint much longer than 1 st.

Anus.-Two segments, rather prominent.

ठ. The chief differences from $o$ are :-
Prosoma.-Caput very much higher and back wall nearly vertical, so that caput is about three times as high as groove and twice as high as thorax, standing up like a square tower (textfig. $6, a)$.

Eyes.-4-rim $=4.4$ or very nearly.
Falces.-Longer than prosoma, after an initial sharp constriction at top they curve outwards to $\frac{2}{3}$ and then in ; end cut square but somewhat pointed forward at inner corner in continuation of straight inner edge. On side view upper edge is convex, widest at centre, lower straight. Width $=\frac{1}{5}$ length. Nearly horizontal. Unguis, length slightly $<$ paturon, S curve with branches much flattened but sharp curve at tip, considerably thicker and darker at base than tip. Groove not defined. Upper margin contains 7 teeth, of which the first 2 are close to base of margin, the 4 at least are strong and subevenly spaced, the last a little weaker. Lower margin 6 or 7 teeth, very small, and much further apart at apical than basal end, but teeth a little variable.

Palpi.-Tibia only a little larger than patella, with moderately strong pointed black-tipped process on upper outer apex. Tarsus has fovea large and extending nearly to the end, with a fine spine encircling rather more than once.

Legs.-The contrasts of colouring are not nearly so distinct as in O .

Opisthosoma.-White belt missing. Upper and centre of dower sides coriaceous.

## Short Description.

Prosoma $=$ opisthosoma. Caput $=$ thorax. Caput very high with nearly vertical walls, tower-like in $\delta^{\circ}$, not so marked in $O$. Occasionally faint white-haired cephalic wedge.
of falx. Upper teeth 5 to angle with 1 or 2 dots beyond; lower teeth 6, as strong as upper, close.
ot falx. Longer than prosoma, width $\frac{1}{5}$ length, outer edge convexly curved on upper and side aspect. Upper teeth 6 or 7 , of which first two comparatively close to root of unguis. Lower 6 dots wider spaced at root of unguis. Unguis slightly $<$ paturon, flat $S$ curve with rather sharp curve at point.

ㅇ palp. Tarsus $=2$ tibia.
o palp. Tibia has moderate, black-pointer, slightly curved process at outer upper apex. Organs surrounded by circle and a bit of thin black spine.

Legs 4.1.3.2, with marked difference between each 2 ; anterior pairs lighter than posterior, bnt not always in $\delta$, dark side-lines in some joints. $p_{1} l$ spine pair ; ti 5 spine pairs, evenly spaced, not very strong; $m_{1} 2$ spine pains; $\mathrm{ti}_{2} 3$ spine pairs nearly as strong as on $\mathrm{ti}_{1} ; \mathrm{m}_{2} 2$ spine pairs nearly as strong as on $\mathrm{ti}_{2}$.

Pedicel nearly as long as caput, 2nd joint very short as compared with lst.

Opisthosoma. Fusiform, not constricted. White belt at about $\frac{1}{4}$ in $\rho$, missing in $0^{*}$.

General colour of prosoma lightish mahogany with black eyeframe, of opisthosoma dark greeny brown.

Note.-The description is based on 12 와 and $8 \sigma^{\circ}$, all from Bukit Besar and Talum. Nos. 93 q and 94, $95 \delta^{\circ}$ were all in same tube, and this fact as well as the general resemblance is evidence of identity of species.

The following measurements were taken :-

$$
\begin{aligned}
& \text { 오 } 5.0 \mathrm{~mm} \text {., } \quad \text { p.s. } 2.3 \times 1.2 \times 1.2, \quad \text { o.s. } 2.4 \times 1.4 \times 1.2 \text {. } \\
& \text { Legs. 1...... } \mathrm{c}+\mathrm{tr}+\mathrm{f} 1 \cdot 7, \quad \mathrm{p}+\text { ti } 1 \cdot 5, \mathrm{~m}+\text { ta } 1 \cdot 1=4 \cdot 3 \\
& 2 \ldots \ldots . \quad 1 \cdot 0, \quad \mathrm{p}+\mathrm{ti}+\mathrm{m}+\mathrm{ta} 2 \cdot 5 \quad=3 \cdot 5 \\
& 3 \ldots . . \quad, \quad 1 \cdot 4, \quad p+t i 1 \cdot 0, \quad m+\text { ta missing } \\
& 4 \ldots \ldots . c+\operatorname{tr} 0 \cdot 9, \mathrm{f} 1 \cdot 8, \quad, \quad 1 \cdot 9, \quad, \quad 1 \cdot 1 \quad=5 \cdot 7 \\
& \text { ठ } 5.2 \mathrm{~mm} \text {., p.s. } 2.4 \times 1.4 \times 2 \cdot 0 \text {, o.s. } 2.4 \text {. } \\
& \text { Legs. } 1 . . . . . \quad c+t r+f 2 \cdot 2, \quad p+t i ~ 2 \cdot 4, \quad m+\text { ta } 1 \cdot 8 \\
& 2 \ldots \ldots . \quad, \quad 1 \cdot 6, \quad, 1 \cdot 8 \text {, , } 1 \cdot 1 \\
& 3 . . \ldots \quad \text {, } 2 \cdot 1 \text {, „ } 1 \cdot 8, \quad \text {, } 1 \cdot 7 \\
& 4 \ldots \ldots . \mathrm{c}+\operatorname{tr} 1 \cdot 1 \text {, f } 2 \cdot 0, \quad, \quad 2 \cdot 3, \quad, \quad 2 \cdot 2
\end{aligned}
$$

The lengths of the specimens varied from $5 \cdot 2$ to 3.7 mm ., the of being on the average slightly longer than $\circ$.
Ants accompanying, nos. 4, 14, 15, 17.

## ㅇ. Myrmarachne cuneata, sp. n. (Text-fig. 7.)

Prosoma. - (a) Length $=\mathrm{p}_{4}+\mathrm{tr}_{4}+\mathrm{m}_{4}+$ ta $\mathrm{a}_{4}$ nearly, slightly $>$ opisthosoma. Caput $=$ thorax. Front wall slightly projecting in centre and stepped back to eyes 2. Side walls straight, very slightly approaching backwards. Back wall strongly projecting at centre into bridge. Bridge narrowed at top, only very slightly at base, though it is liable to appear so owing to white wedge. Thorax edges curve very slightly outwards to $\frac{1}{2}$, then inward to rear, which is cut off convexly straight.
(b) Front wall vertical, top of caput straight and level, groove shallow and broad, bottom not below eye 4 . Thorax rises behind to above half way up eye 4 at $\frac{1}{3}$ and then slopes convexly backwards to rim, the final concavity before rim being negligible. Rim rather marked and traceable round to caput.

Colon medium mahognny, lightest at sides and much darkest at top of caput. Eye-frame black, rather broader than usual and very distinctly broken between eyes 3 and 4. A very strong white wedge on either side of bridge, smooth and not due to hairs.

Eyes.-1st row straight by summits, 1.1 and 1.2 subcontact, 2 slightly behind $1.2=\frac{1}{2} 1$. Eye square slightly broader than long and sides slightly approaching backwards. 2.3 very slightly $<3.4,4=$ or very slightly $>2$. 4 projects but not markedly so, and 4 -rim very much $<4.4$.

Falces.-Project nearly horizontally forward by lower edge,
visible from above, length $>\frac{1}{2}$ caput, upper edge strongly convex being subangular at $\frac{1}{3}$, length $=2$ breadth. Fiom above erlges subparallel, outer being slightly convex. Upper teeth 6,1 basal close to root of unguis, small and liable to be missed ; 2.3.4.5 largest with increasing spaces, 6 beyond angle very small. Lower teeth 6, strong, close, from base of unguis to level with 5 of upper. Thickish light upper scopula longest at angle; thin dark lower. Unguis rather strong. Colour lighter than cephalothorax, glabrous.

Text-figure 7.


Myrmarachne cuneata, sp. n., $\%$.
a. Profile. b. Epigyne.

Maxillce.-Length $=\mathrm{c}_{1}+\mathrm{tr}_{1}=$ falx nearly. Outer edges paralle] to end of labium, then inclined straight outwards to rounded outer corner. Serrula at end only, which is slightly rounded. Truncation long, very oblique, with very strong black scopula. Below scopula inner edge hollowed in front and at side of labium. Colour light.

Labium.-Length $>2$ breadth, parallel sides, slightly constricted at middle; strong dark scopula.

Palpi.-Spring from near base of maxilla. $\mathrm{Tr}=$ width maxilla: $\mathrm{f}=\frac{1}{2}$ caput, parallel sides, rounded ends, flattened, length $<3$ breadth; $p=\frac{1}{2} \mathrm{f}$, broadening to apex from narrow base. $\mathrm{Ti}<2 \mathrm{p}$, broadens from base to apex, which is 2 width p apex. Tia very slightly $>$ ti, rounded end ; the two together making a plate $=2 \mathrm{f}$, hairy on both edges. Total length of palpus when extencled $=2$ falx.

Legs.-Order 4.1.3.2, with all differences marked.
1st. c white, length $=2 \frac{1}{2}$ width, parallel or very slightly tapering.
tr white, with sometimes dark patch on outer side ; breadth $=$ length $=\frac{1}{4} c$.
f white, strong black side-lines, clubbed at base, $=$ ti.
$\mathrm{p}=\frac{1}{3} \mathrm{ti}$, white with dark side-lines, 1 spine pair.
ti white with dark side-lines, 7 spine pairs, or 7 and 6 , last 3 or 4 pairs all terminating about level at end of joint.
m light, $>\mathrm{p}, 2$ spine pairs, of which last reaches to middle of ta.
ta light $=\frac{1}{3} \mathrm{~m}$.
2nd. c brown, strongly swollen at centre, length $=$ breadth.
tr broader than long, brown except for patch of white on fore side.
Other joints, proportions, and colours as lst, but are slightly greater in proportion, and ta only slightly $<\mathrm{m}$.
ti has 3 spine pairs, m 2 pairs.
3 rd. c a little $>\mathrm{c}_{2}$, brown.
ti. short, cylindrical, biown.
$\mathrm{f}>\mathrm{ti}<\mathrm{p}+$ ti, brown, very slightly clubbed at base.
$p=\frac{1}{3}$ ti, curved downward, light except above apical end.
ti brown, slender, slightly lighter at end.
m nearly $=\mathrm{ti}$, light, darker shading at basal sides.
$\mathrm{ta}=\frac{1}{2} \mathrm{~m}$, light.
4th. $\mathrm{c}<\mathrm{c}_{1}$, brown except for light below.
tr much longest, white with dark basal side-markings, cylindrical, $>$ c.
f brown, slightly clubbed.
$p$ white except for brown above at base and apex, $=\frac{1}{4} \mathrm{ti}$.
ti brown, lightest at apex.
m brown, nearly $=$ ti.
ta white, $<\frac{1}{3} \mathrm{~m}$.
The light $c_{1}$ and $\mathrm{tr}_{1}$ and $\mathrm{tr}_{4}$ are very noticeable, as also the dark side-lines on the light anterior legs.

Sternum.-Blunt-pointed behind $c_{1.1}$, which are about $\frac{1}{4}$ their width apart, and between $c_{2.3}$. Wider and pointed close behind $\mathrm{c}_{2}$, attempt at a point at $\mathrm{c}_{3}$, and then tapers to long point in front of $c_{4.4}$, which are in contact. At widest point $=c_{2}$. Colour dark mahogany.

Pedicel.-Short $=\frac{1}{2}$ caput, rather stout. Joints about equal, first very slightly longer.

Opisthosoma.-Middle thickest, constricted at $\frac{1}{4}$. Brownish green with white transverse band at constriction, somewhat lighter below, with longitudinal central portion bordered by faint white lines from epigyne to spinners. Lung-sacs dark, wide apart. Epigastric fold procurved.

Epigyne.-A lighter semicircle in front of epigastric fold, in the centre of which is a dark marking somewhat hourglass-shape (text-fig. 7, $b$ ).

Spimuers.-1st brown, thickness slightly greater at base than apex. 2nd longer, thinnest, lighter, cylindrical. 3rd as light as 2nd, slightly thicker, subcylindrical.

## Short Description.

Prosoma very slight, longer than opisthosoma. Cephalic groove broad and shallow, caput not very much higher than thorax. A strong white wedge not due to hairs at sides of groove.

Falces nearly horizontal by lower edge. Upper teeth 6 , with 4 middles much largest. Lower teeth 6, strong, close. Ta of palp $=$ or very slightly $>$ ti.

Legs 4.1.3.2, with all differences marked. 1st has white e and tr, and 4th white tr larger than c. The anterior legs are light with strong dark side-lines f to ti . $\mathrm{p}_{1}$ has 1 spine pair, $\mathrm{ti}_{1}$ 7 pairs or $6.7, \mathrm{~m}_{1} 2$ pairs. $\mathrm{Ti}_{2}$ has 3 spine pairs, $\mathrm{m}_{2} 2$.

Pedicel shortish, with $\mathrm{j}_{1}$ very slightly $>\mathrm{j}_{2}$.
Opisthosoma has thin white belt at $\frac{1}{4}$ and is widest at $\frac{2}{3}$ back.
Noies.-Description based on 4 우 found at Bukıt Besar 3500 ft ., Talum 4000 ft ., and Gedong. One of the specimens only (from Bukit Besar) is accompanied by its mimickerl ant of species no. 2. The type-specimen is rather lighter than any of the others. Differences from specimen to specimen are very slight. In one tr, has a distinct dark exterior marking not visible in the others. The sternum point is rather unusually far from the base of the labium. The cephalic wedge is always very noticeable and serves as a recognition mark.
This species is in many ways very like Myrmarachne maxillosa, but it may be distinguished without difficulty by general shape of prosoma and opisthosoma, which are less squat, teeth of lower margin, white cephalic wedge, larger pedicel, and shape of sternum, which is pointed instead of undulated between coxæ and constriction of opisthosoma.

Total lengths $7 \cdot 8,7 \cdot 6,7 \cdot 3,6 \cdot 2 \mathrm{~mm}$.
Legs of specimen 6.2 mm . long :-

|  | $\mathrm{c}+\operatorname{tr} 1 \cdot 0, \quad \mathrm{fl} 1 \cdot 9$, | $\mathrm{p}+\mathrm{ti} 2 \cdot 3$, | $m+t a 1$ | $1 \cdot$ | $=6 \cdot 3$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2..... | $\mathrm{c}+\mathrm{tr}+\mathrm{f} 1 \cdot 8$, | $1 \cdot 9$, |  | $1 \cdot 0$ | $=4.7$ |
| 3. | 2.1, | , 1.9, |  | $1 \cdot 8$ | $=5 \cdot 8$ |
| 4. | $\mathrm{c}+\operatorname{tr} 1 \cdot 1, \mathrm{f} 2 \cdot 1$, | , 2.5, | 2 | -1 | $=7 \cdot 8$ |

Ants accompanying, no. 2.

## ơ. Myrmarachne ramosa, sp. n. (Text-fig. 8.)

Prosoma.-(a) Length $=\mathrm{p}_{3}+\mathrm{ti}_{3}+\mathrm{m}_{3}+\mathrm{ta}_{3}$ nearly, slightly $>$ opisthosoma. Caput = thorax. Front wall recurved, not stepped back to eye 2. Sides straight or very slightly convex, parallel. Back wall straight with well rounded corners. Thorax joined across groove by distinct paralled-sided bridge which appears from above as a sharp constriction, though groove at base is nearly as wide as caput. Thorax swells out at sides to about $\frac{1}{3}$, and then narrows with slightly convex and concave slopes to end which is cut square.
(b) Front wall of caput nearly vertical but with very slight forward batter, top straight sloping very slightly up to eye 4 , over
which it is romnded. Back wall slopes straight down to narrow groove, height $=\frac{1}{2}$ caput. Thorax slopes slightly up to $\frac{1}{3}$ and then convexly and concavely to end where is rim, which can be traced round to caput.

Colour mahogany, darkest on caput. Black eye-frame widely broken between 3 and 4. Faint light-haired wedges at sides of groove.

Eyes.-lst row slightly procurved by summits. $2=\frac{2}{5} 1.1 .1$ an appreciable gap, 1.2 slightly wider. Eye square markedly wider than long and very slightly wider at 4.4 than 2.2 . 2.3 distinctly $<3.4,3$ below upper tangent to $2.4,4>2$ and lighter in colour, projects over edges. 4 -rim $<4.4$.

Text-figure 8.


Myrmarachne ramosa, sp. n., ठ.
$a$. Profile. b. Sternum \&c. c. Right palpus from below.
Falces.-Longer than caput < prosoma. Length $=3$ width. Inner edge straight with black ridge, outer convex with black ridge. End hollowed, with onter angle sharp, inner chamfered. On side view much deepest just beyond base, decreases considerably to apex, upper edge being straight and lower slightly hollow. Unguis long and tip reaching beyond end of maxillæ, flat S curve, with short branch or knob at $\frac{1}{3}$. Groove non-existent and upper and lower teeth liable to be mixed up. Upper teeth 9 , of which that nearest to unguis is strongest, the next 5 are spread over the paturon with gap in centre largest, last teeth closer, smaller, and overlapping maxillæ. Lower teeth about 10, small, spread over
length of paturon but closer at apical end. The two rows of teeth are notably crooked (text-fig. 8, $b$ ).

Maxillu.-Length $=c_{1}+\operatorname{tr}_{1}$. Outer edges parallel to end of labium, then inclined outwards to well rounded corner and slightly convex with truncation $45^{\circ}$; strong dark scopula: Below scopula inner edge hollowed in front and at sides of labium. Serrula. Colour light mahogany.

Labium.-Length > 2 breadth, parallel sides, broadly and very slightly constricted near apex, end slightly hollowed, dark scopula. Dark mahogany, light at apex.

Palpi.-Spring from near base of maxilla. Tr $>$ width maxilla. $f=\frac{1}{2}$ caput, parallel sides, somewhat reduced at ends and slightly Hattened. $\mathrm{p}<\mathrm{tr}<\frac{1}{2} \mathrm{f}$, broadening to apex from narrow base. Ti only a little $>\mathrm{p}$ above, $=$ nearly 2 p below, slightly broadened from base to apex ; short, small, blunt, light straight process at outer lower apex, largish hairs on inner edge. Ta a little >ti, blunt, suboblong. Fovea occupies little more than basal half. Organs have a fine black spine springing from outer basal rim of fovea passing backwards and inwards with double spiral, and finally pointing forward rather on inner apical rim (text-fig. 8, c).

Legs.-4.1.3.2, with difference between 3 and 2 only slight.
1 st. c length $>2$ breadth, rather markedly tapering, brown.
tr narrowedr, slightly tapering, $<\frac{1}{2} \mathrm{c}$, brown.
f clubbed at base, $=$ ti, brown, darkest above.
$p=\frac{1}{3}$ ti, slight, curved, light, shaded at sides.
ti 4 spine pairs, with sometimes a fifth very small, light, dark at sides.
$\mathrm{m}=1 \frac{1}{2} \mathrm{p}, 2$ spine pairs near base and apex, basal much largest.
ta $<\frac{1}{2} \mathrm{~m}$, dark.
2nd. c much shorter, gibbous at base, lighter.
tr cylindrical, $<\frac{1}{2}$ c, light with shaded sides.
$\mathrm{f}<\mathrm{f}_{1}$, only a little thicker at base than apex, lighter, but side-lines darker especially fore.
$\mathrm{p}=$ nearly $\frac{1}{2}$ ti, strong especially at apex, slightly curved, light.
ti light, 3 spine pairs.
$\mathrm{m}=\mathrm{p}, 2$ spine pairs, light.
ta $<\frac{1}{2} \mathrm{~m}$, light.
$3 \mathrm{rd} . \mathrm{c}, \operatorname{tr}, \mathrm{f}$ as 2 nd , but dark all over. p , ti, m , ta slightly lighter than these. $\mathrm{p}=\frac{1}{3}$ ti nearly, $\mathrm{m}=\mathrm{ti}, \mathrm{ta}<\frac{1}{2} \mathrm{~m}$.
4 th. $\mathrm{c}=\mathrm{c}_{1}$, cylindrical, very slight tapering.
$\mathrm{tr}=\mathrm{c}$, cylindrical, both c and tr lighter than 3rd and dark at sides.
f brown, nearly $=\mathrm{p}+$ ti.
$\mathrm{p}>\frac{1}{4}$ ti, light, with dark apex above and at sides.
ti, brown; $m=$ ti nearly, slenderer, and back lighter at apex.
ta $<\frac{1}{4} \mathrm{~m}$, light.

On the whole the legs strike one as dark, none of the coxæ or trochanters being really light.

Stermum.--Blunt-pointed between $c_{1.1}$, which are about $\frac{1}{2}$ width apart, blunt-pointed between $c_{1.2}$, which are not in contact, swells out with straight edges between $c_{2.3}$, which are wide, and tapers to moderately long point in front of 4.4 , which are in contact. Widest $=c_{2}$. Dark mahogany as coxæ.

Pedicel nearly equals caput. $j_{1}$ brown, longer than $j_{2}$, below $=2 \mathrm{j}_{2} . \quad \mathrm{j}_{2}$ light with black fore end.

Opisthosoma $=$ prosoma. Thin and round with broad constriction at $\frac{1}{4}$. Brown above and below in front of epigastric fold, which is slightly recurved. General colour very dark.

Spimers.-1st light, stoutish, barrel-shaped. 2nd lighter, slenderer, cylindrical. 3rd longest, darker, slender, cylindrical.

Anal tubercle.-Prominent, 2-jointed.

## Short Description.

Prosoma $=$ or slightly $<$ opisthosoma. Cephalic gioove rather narrow, with thorax about half lieight of caput and wedge of white hairs not very strong.
of falx longer than caput < prosoma, flattened above. Unguis as long as paturon, flat $S$ curved, with very short knob-like branch. Upper teeth 9 , lower 10 , but lines liable to be confused.
o palp $=$ or nearly $=$ falx. Tibia has short blunt process at outer lower apex. Organs have a spine twisted spirally twice and terminating pointing straight forward at inner apex.

Legs 4.1.3.2 with difference 3.2 slight, no very marked colour contrasts. $\mathrm{Tr}_{1} 4$ spine pairs, $\mathrm{m}_{1} 2$ pairs, ti ${ }_{2} 3$ pairs, $\mathrm{m}_{2}$ 2 pairs.

Pedicel nearly $=$ caput, with 1 st joint markedly greater than 2nd, especially below.

Opisthosoma widely constricted at $\frac{1}{4}$, with longitudinal brown coriaceous marks above and below and in front of epigastric fold.

Note.-Description is based on $4 \delta$ from Bukit Besar and Biserat, two of the specimens from the latter associated with ants nos. 9 and 16 respectively. There is not much difference between specimens except some variation in intensity of leg colouring.

Measurements :-
Total lengths $5 \cdot 0,5 \cdot 2,5 \cdot 4,5 \cdot 8 \mathrm{~mm}$. ex falces.
Legs of specimen $5 \cdot 2 \mathrm{~mm}$. long :-

|  | - $0 \cdot 8$, | f $1 \cdot 2$, | p | 2 | $\cdot 1$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | $0 \cdot 6$, | ,, $1 \cdot 2$, | $1 \cdot 3$, | $1 \cdot 0$ | $4 \cdot 1$ |
| 3 | $0 \cdot 8$, | , $1 \cdot 2$, | $1 \cdot 3$, | $1 \cdot 2$ | $4 \cdot 5$ |
|  | $1 \cdot 0$, | , $\mathrm{l} \cdot 7$, | $2 \cdot 0$, | $1 \cdot 9$ | $=6$ |

ㅇ. Myrmarachne albicrurata, sp. n. (Text-fig. 9.)
Prosoma.-Length $=$ opisthosoma $=p_{4}+\operatorname{tr}_{4}+\mathrm{m}_{4}$. Greatest breadth distinctly $>$ greatest height. Caput $=$ or slightly $<$
thorax. Front very slightly recurved, slightly stepped er back to eyes 2 . Side walls very slightly convex and tapering outwards towards eyes 4, Back wall strongly procurved at groove, which is strongly constricted above and much less so below. Thorax curved rather strongly outwards from groove to slightly in front of centre and then inwards to rear, which is cut nearly square. Rim dark.

Caput somewhat convex and higher behind than before. Slopes at moderate angle behind, with groove low and < half height of caput and broad. Thorax rises to about $\frac{1}{3}$ and then falls convexoconcavely to turned-up but not abrupt rim, which is dark and traceable round to caput. A slight white wedge at thoracic groove. The general shape is well rounded at angles.

Colour light mahogany, with black eye-frame broken in front of 4 and with lower boundary not so well,defined as usual.

Text-figure 9.


Myrmarachne albicrurata, sp. n., 争. M. lateralis, sp. n., f. a. Sternum \&c. of M. albierurata. b. Do. of M. lateralis. c. Epigyne of M. lateralis.

Eyes.-1st row straight, intervals 1.1 and 1.2 slight and about equal. Eye square broader than long, parallel sides. 3 midway between 2 and $4.4>2$. 4.4 distinctly $>4$-rim.

Falces.-Length $=\frac{2}{3}$ caput, nearly parallel with inner edge, very slightly convex, length $=2 \frac{1}{2}$ breadth. Side view strongly convex or rather angular at nearly $\frac{1}{2}$, base almost horizontal. Groove marked, both outer and inner scopule lighter and thinner than usual. Upper teeth 8 or 9 , slightly irregular in size and spacing; lower 8 or 9 closer, especially away from root of unguis.

Maxille $=$ cornuta, very light in colour; scopula dark, strong.
Labium $=$ cornuta, very slightly darker than maxillæ; scopula light, strong.

Palpi.-Spring from near base of maxilla. Length of trochanter $=$ narrowest width maxilla. Femur $<\frac{1}{2}$ caput, flattened with rounded ends, of which basal is slenderer. Patella about $=$ trochanter. Tibia slightly < tarsus. Usual shape, but tarsus slightly more pointed and hairs even on imner edge rather scanty. Joints to femur white, patella to end much lighter than usual.

Leys.-4.1.3.2 with 3 nearly $=1$.
1st. c cylindrical, length $=2$ breadth, white.
tr length $<$ width c , narrower, white with slight brown longitudinal marks on inner side.
f nearly $=$ caput, slightly widened at base but not clubbed, white with dark longitudinal side-marking near basal half of fore side.
$\mathrm{p}=\frac{1}{3} \mathrm{ti}$, light with dark side-lines, no spines.
ti $>\mathrm{f}, 4$ spine pairs moderate, evenly spaced and subequal, but 3rd rather the strongest, white with dark side-lines.
$\mathrm{m}=\mathrm{p}, \underline{2}$ spine pairs of which first is as strong or stronger than 3rd of ti, white.
ta very slightly $<\mathrm{m}$, white.
2nd. c length $=\frac{1}{2} c_{1}=$ breadth, gibbous, white.
tr length $=\frac{1}{2} \mathrm{c}=$ breadth, white.
$\mathrm{f}<\mathrm{f}_{1}$, white.
p $>\frac{1}{2}$ ti, white.
ti 2 spine pairs, $\mathrm{p}+\mathrm{ti}=$ or $<\mathrm{f}$, very slight dark side-line, white.
m 2 spine pairs, white.
ta very slightly $<\mathrm{m}$, white, $\mathrm{m}+$ ta $=\mathrm{p}+$ ti.
3 rd. c slightly $>\mathrm{c}_{2}$, brown, less gibbous.
tr $>\frac{1}{2} \mathrm{c}$, brown, darkest at sides.
f $>\mathrm{f}_{1}$, slightly broader near base, brown.
$p>\frac{1}{2}$ ti, light with brown above distally.
ti light with dark sides most marked at base, $\mathrm{p}+\mathrm{ti}$ slightly $>\mathrm{f}$.
m slightly $>$ ti, white.
ta $<\mathrm{m}, \mathrm{m}+$ ta distinctly $>\mathrm{p}+$ ti.
4 th. c distinctly $>\mathrm{c}_{1}$, with same proportions, light with dark sides.
tr nearly $=\mathrm{c}$, slenderer, white with dark markings at side, of which fore much the stronger.
f long, slightly clubbed, brown.
$\mathrm{p}=\frac{1}{3} \mathrm{ti}$, white, brown above distally.
ti brown except for slight white continuation of $p$ below. $\mathrm{p}+$ ti distinctly $>\mathrm{f}$.
m long, light except for slight darkening at basal sides in continuation of ti.
ta $=\frac{1}{3} \mathrm{~m}$ and very slightly darker.

Sternum.-Short-pointed between $c_{1.1}$, which are $<\frac{1}{4}$ wilth apart, and between $c_{1.2}$, extends to sides between $c_{2.3}$, which are very wide apart, contracted between $c_{3.4}$, and the point, which is not well marked, is met between $c_{4 .}$, which are not quite in contact, by a very fine-pointerl projection from the fore lorum of the pedicel. Greatest width $=\mathrm{c}_{3}$. Brown.

Pedicel $=\frac{1}{2}$ caput. $j_{1}>j_{2}$, very much so below ; above the fore lorm is slightly broader and longer than the second, below much stronger and broader and extended forward into a very long fine point.

Opisthosoma.-Snbcylindrical, length $=3$ or 4 breadth, broadly but not deeply constricterl at $\frac{1}{3}$. Dark green, with faint white oblique markings at constriction and suggestion of white markings below. Lung-sacs brown and wide apart. Epigastric fold recurved, very clear cut.

Epigyme.-Immature.
Spinners.-1st much thickest, barrel-shaped, dark. 2nd about same length, very thin, white. 3rd about same length, very slightly thicker than 2nd, darkest.

Anal tubercle. Moderate.

## Short Description.

Prosoma $=$ opisthosoma. Groove rather deep but broad, and thorax not rising much behind it. Constriction appears rather sharp from above, cephalic wedges slight and with a very few white hairs.

Ta of palp a little $>$ ti.
Legs 4.1.3.2 with 1 and 3 nearly equal. The anterior legs are almost white as are the coxr of $4 . \mathrm{tr}_{t}$ as long as $\mathrm{c}_{\ddagger}$ but thinner, white with dark sides. $c_{4}$ greatest coxa. $p_{1}$ no spine, ti 4 spine pairs, ti 2 pairs. The backward point of sternum met by a very long and narrow point reaching forward from under side of pedicel. Legs 1 about $\frac{1}{4}$ their width apart; legs 4 not quite in contact.

Perlicel $=\frac{1}{2}$ caput. $\mathrm{j}_{1}>\mathrm{j}_{2}$.
Opisthosoma subcylindrical, broad but shallow constriction at $\frac{1}{3}$, with faint oblique white markings sometimes evanescent.

Note.-Description based on 3 immature of from Ban Sai Kan, Nandock, and K. Mahek, Jalor, only one of which was in good condition.

Measurements $5 \cdot 7,5 \cdot 6$, and $4 \cdot 5 \mathrm{~mm}$.
Legs of specimen 4.5 mm . long : -


No ants accompanying.
It is quite possible that this species and the following one may
be identical; the grounds on which I keep them apart provisionally are
(1) Shape of stermum (text-fig. 9, a, b).--In M. lateralis legs 2 are as close to one another as legs 1 ; in M. albicrurata they are normal.
(2) Spine pairs.-albicrurata, $\mathrm{p}_{1}$ no spines, $\mathrm{ti}_{1} 4$ prs., $\mathrm{ti}_{2} 2$ prs. lateralis, $\mathrm{p}_{1} 1$ spine, ti $\mathrm{i}_{1} 5$ prs., $\mathrm{ti}_{2} 3$ prs.
(3) albicrurata light in colour, lateralis dark.

Of two specimens, however, which were much damaged and cannot be certainly identified, I found in the first (collector's number 4) agreement with albicrucota in (1) and (3) and with lateralis in (2) ; while the other (collector's number 92 A ) agrees with albicrucrata in (1) and (2) and with lateralis in (3).

## ㅇ. Myrmarachne lateralis, sp. 11. (Text-fig. 9.)

Prosoma.-Length $\overline{<}$ opisthosoma $=\mathrm{ti}_{4}+\mathrm{m}_{4}$. Caput $=$ thorax. Caput hardly stepped back at eyes 2, well rounded at rear corners. Bridge rather broad at top and only very slightly constricted below. Thorax spreads ont behind to widest at $\frac{1}{3}$, well rounded.

Groove shallow but broad, with rim thin. Thorax considerably lower than caput.

Colour dark, almost black on caput, strong wedge of white hairs.
Eyes.-1st row procurved, intervals slight but perceptible. $1=3$ times $2.2 .3=3.4,3$ very small and rather above inner tangent to 2.4. $4=2$. $4.4>4$-rim. Eyes 2 and 4 rather prominent.

Falces.-Length $=\frac{1}{2}$ caput, nearly horizontal, sides subparallel, :slightly convex outside at distal end. On side view straight below, strongly convex above, with angle at $\frac{1}{3}$ to $\frac{1}{2}$. Teeth 7 or 8 , largest at centre, falling in size both ways. Lower 8 or 9 close, largest at centre, smaller than upper. Moderate greyish outer scopula. Inner a few dark hairs.

Maxille, labium = cornute.
Palpi.-Spring from base of maxilla. $\mathrm{Tr}=$ width of maxilla at narrowest; femur flattened, $<\frac{1}{3}$ caput, reduced and rounded at ends, greatest width $=\frac{1}{3}$ length. p very slightly larger than ti, expands distally. Ti and ta form flat plate, hairy especially on inner edge. Ta $>\mathrm{f}>\mathrm{ti}$, but differences not great.

Legs.--4.1. 3. 2.
1st. c claviform, length $<2$ breadth, brown.
tr $<$ width of $c$, light with strong dark side-markings.
f long, claviform, light with dark side-marks very broad at base.
$p>\frac{1}{3}$ ti, light with dark side-marks, 1 spine below at $\frac{2}{3}$.
ti $<\mathrm{f}$, light with dark side-marks; spines 5 pairs, or 5 fore and 6 aft , the 3 rd considerably strongest.
m much < ti and darker, 2 spine pairs of which 1st is very strong.
$\mathrm{ta}=\frac{1}{2} \mathrm{~m}$, clark at base, light at tip.

2nd. c white, $<\mathrm{c}_{1}$, gibbous.
tr white, $<\frac{1}{2} \mathrm{c}$.
$f$ white.
Other joints marked as lst but much lighter.
$p=\frac{1}{3}$ ti, ti 3 pairs of spines, $m>\frac{1}{2}$ ti 2 prs., ta $>\frac{1}{2}$ ti.
$3 r d$. e \& tr considerably stronger than in 2 nd, dark brown.
f slightly clubbed, dark brown.
$p$ brown but very slightly lighter, $=\frac{1}{3} \mathrm{ti}$, a long hair above at distal end.
ti dark brown, stout, $<\mathrm{f}$.
m slightly $>$ ti and slenderer, dark at base, lighter toward apex.
ta light, $>\frac{1}{3} \mathrm{~m}$.
4 th. e largest, light centre strip below, otherwise dark.
tr light with dark sides, at any rate apically, cylindrical, $=c$.
f long and dark, very slightly clubbed at base.
$p$ light except for apex above, $=\frac{1}{4}$ ti.
ti dark, < f.
m dark, slightly $<$ ti and thinner.
$\mathrm{ta}=\frac{1}{3} \mathrm{~m}$, lighter.
Sternum.-Short-pointed between 1.1, which are very close, and between 2.2 , very strongly contracted between 2.2 , which are very close, swells out with boss between 2.3, which are well separated. Tapers between 3.3 to a point in front of 4.4 , which are as far apart as 1.1. Greatest width $=c_{2}$. Dark brown.

Pedicel $=$ caput. $\mathrm{j}_{1}$ much $>\mathrm{j}_{2}$.
Opisthosoma.-Fusiform, slightly constricted at $\frac{1}{4}$, widest a little behind middle. Dark greenish, with thin oblique white markings at sides of constriction extending well back below. Epigastric fold straight to procmed ; lung-sacs wide and region between them hain'y.

Epigyne.-A dark horseslioe enclosing a central fork. (Textfig. 9, c.)

Spinners.-lst barrel-shaped, dark. 2nd lighter, longer, thinner: 3rd cylindrical, < 2nd, darkest.

Anal tubercle.-Two-jointed, not very marked.

## Short Description.

Prosoma well romnded, with broad shallow groove and caput considerably higher than thorax. Cephalic wedge of strong white hains but not very broad.

Falces nearly horizontal, with teeth upper 7 to 8 and lower 8 or 9 , the latter close and much smaller than the upper.

Legs 4.1.3.2, with 4 much the longest. $p_{1}$ las a single spine, $\mathrm{ti}_{1} 5$ pairs on 5 and $6, \mathrm{~m}_{1} 2$ prs., $\mathrm{ti}_{2} 3$ prs., $\mathrm{m}_{2} 2$ prs. 2 nd legs white, lst white except coxæ.

Sternum well romnded, both $c_{2.3}, \mathrm{c}_{1.1}$ very close, more so than $c_{1.4}, c_{2.3}$ wide.

Pedicel $=$ caput. $j_{1}$ much $>\mathrm{j}_{2}$.

Opisthosoma $=$ prosoma, fusiform, constricted at $\frac{1}{4}$ and with oblique narow white stripes commencing at sides of constriction.

Note.-Description based on 2 f from Bukit Besar and Sumgkei. Lengths $6 \cdot 2,6 \cdot 3 \mathrm{~mm}$.

The following measurements are from the specimen $6 \cdot 2 \mathrm{nmm}$. in total length:-


No ants accompanying.
б. Myrmarachne biseratensis, sp. n. (Text-fig. 10.)

Prosoma. - (a) Length slightly $>$ opisthosoma $=\mathrm{p}_{2}+\mathrm{ti}_{2}$ $+\mathrm{m}_{2}+\mathrm{ta}_{2}$. Greatest height and greatest breadth each $=\frac{1}{2}$ length. Caput $=$ thorax. Front wall very slightly recurved and stepped back at eye 2. Side walls strongly convex. Groove narrow and slightly recurved. Thorax well rounded at sides and terminated with almost square end of $\frac{2}{3}$ full width. Rim strong.
(b) Top of caput flat. Groove narrow and shallow. Thorax rises slightly behind it and then falls with strongly convex slope to end with strong concave rim.

Text-figure 10.


Myrmarachne biseratensis, sp. n., $\delta$.
a. Profile. b. Palpus. c. Sternum \&c.

Dark, especially on caput, but eye-frame traceable, black.
Eyes.-1st row straight by summits, 1.1 very close, 1.2 close. $2=\frac{1}{3} 1$, 3 slightly nearer 2 than 4 and on upper tangent, 4 slightly $>2$. Eye square broader than long, 4.4 very slightly $>2.2$ and about $=4-\mathrm{rim}$.
l'alces $=$ cephalothorax, length $=5$ hreadth, straight inner elge, outer slightly convex, broadest at $\frac{2}{3}$. End concavely trumcated and facing slightly outwards so as to make inner end rather pointed but not projecting. Upper edge at first flat, then rises with strong convexity so as to make it much higher at $\frac{2}{3}$. Lower edge at first flat, then a convex step downward and flat to end. Lighter colour and stippled.

Unguis not as long as falx, reaching only to end of flat, doubly curved and with distinct prominence (not, however, to be called a branch) at $\frac{1}{2}$. Groove rather distinct, but not deep. Upper teeth 4,1 at base of unguis strong but very close and liable to be missed, perhaps rather a process at end of falx; the other 3 equally spaced along 2nd basal quarter. Lower teeth 15 , evenly spaced, stronger than usual and, at any rate, some of them alternate in size.

Maxilloe.-Shape as maxillosa. Scopula very strong, but grey. Outer portion dark, inner equally wide, light.

Labium.-Proportions and colouring as maxillosa. Slightly constricted in middle, parallel sides, and apex concave with dark scopula.

Palpi.-Spring from near base of maxilla. $\operatorname{Tr}>$ width maxilla, dark sides, light below; $\mathrm{f}=2$ tr, dark, with grey hairs slightly curved ; $\mathrm{p}<\mathrm{tr}$, parallel sides. Ti nearly $=\mathrm{f}$, short process at fore, outer, lower corner, widens apically. Ta a little $>\frac{1}{2}$ ti, oblong. Both ti and ta are hairy, with a strong fringe on inner edge. $\mathrm{Ti}=$ ta below. Fovea occupies a little more than basal half of ta, and is surrounded by a dark hairy edge. A spine springs from basal inner edge, coils up inner side round $1 \frac{1}{2}$ times and terminates in a fine point facing forwards. Style long and looped backwards from bulb in front.

Legs.-4.1.3.2, with differences more or less equal.
1st. c ovate, lighter than falces.
tr < width c, lighter with dark at sides.
f clubbed, dark, long.
p curved $=\frac{1}{3}$ ti, no spines, dark.
ti dark, spines difficult, but apparently there have been
5 pairs all weak, of which first two are basal and medial
and last three fairly close at apical end.
$\mathrm{m}=\frac{2}{5}$ ti, dark, 2 spine pairs much stronger than ti.
$\mathrm{ta}=\frac{1}{2} \mathrm{~m}$, dark.
2 nd. c a little longer than broad.
tr short, dark sides.
f dark, more clubbed than $\mathrm{f}_{1}$.
$\mathrm{p}=\frac{1}{2}$ ti, curved, dark at apex above and sides, no spines.
ti dark at sides, 2 spine pairs.
m nearly $=\frac{1}{2}$ ti, light except for dark marks on sides at base, 2 spine pairs.
$\mathrm{ta}=\frac{1}{4} \mathrm{~m}$, light.
The tibial spines of 2 nd are very strong compared with those of 1 st.
Proc. Zool. Soc.-1917, No. XXII.

3rḍ. c, tr, f, dark and all a little longer and stronger than 2 nd . $p=\frac{1}{3}$ ti, both dark.
m nearly $=$ ti, light.
$\mathrm{ta}=\frac{1}{4} \mathrm{~m}$, light.
4th. $\mathrm{c}<\mathrm{c}_{1}$, stout, length $=1 \frac{1}{2}$ greatest breadth, dark.
tr $>\mathrm{c}$, much longest tr, light with dark sides.
f long, clubbed, dark.
$p=\frac{1}{5} \mathrm{ti}$, dark.
tr dark, cylindrical.
$\mathrm{m}=$ ti nearly.
ta $=\frac{1}{5} \mathrm{~m}$, light.
Sternum.-Truncated between $\mathrm{c}_{1.1}$, wvhich are about $\frac{1}{3}$ width apart, swells out between other c , especially between $\mathrm{c}_{2.3}$, which are only a little wider than the others, tapers with undulating sides to a sharp but rather short point in front of $\mathrm{c}_{4.4}$, which are in sulb-contact.

Pedicel.-Short but distinctly visible from above. $\mathrm{j}_{1}$ as seen from above distinctly longer than $\mathrm{j}_{2}$. 1st upper lorum decreases backwards, where it is procurved, much broader than 2 nd . Whole length of pedicel $<2$ greatest width. It is received into a short socket projecting from opisthosoma.

Opisthosoma.-Egg-shaped, widest about $\frac{2}{3}$. Above general colour dark greenish brown, below somewhat light, the front of epigastric fold yellowish, corneous, behind a longitudinal lighter band to spinners, widest at fore end, whence it reduces suddenly and then parallel.

Spinners. - 1st stout, subconical. 2nd longest, lightest, thinnest, cylindrical. 3rd very slightly stouter, shorter, and darker than 2nd. All spring from projections of abdomen and are 2 -jointed, with 2 nd joint very short.

Anus on a strong tubercle.

## Short Description.

Prosoma very slightly $>$ opisthosoma. Caput $=$ thorax. Groove narrow and shallow. Thorax well rounded behind and only slightly lower than caput. Sides of caput convex. Falces = cephalothorax, subparallel, on side view much thicker towards apex. Unguis slightly < paturon and with distinct prominence. Teeth, upper 4 all in basal half and are close to base of unguis; lower 15 partly alternate in size.

Palpi.-Tibia $=$ tarsus. Fovea only occupies basal half of tarsus, a spine springing from basal inner edge coils $1 \frac{1}{2}$ round and terminates pointing forward.

Legs 4.1.3.2, with moderately equal intervals. Spines of ti ${ }_{1}$ noticeably weak but probably 5 pairs, $\mathrm{m}_{1} 2$ pairs, $\operatorname{tr}_{2} 2$ pairs, very strong for 2 nd leg, $m_{2} 2$ pairs. $\operatorname{tr}_{1}$ and $t r_{+}$are distinctly lighter than other joints.

Sternum rather broad. 2nd and 3rd coxæ only a very little further apart than the others.

Pedicel shortish.
Opisthosoma, as whole spider, rather squat.
Note. The description is based on a single of from Biserat, length 6.2 mm . Its general shape reminds one of $M$. maxillosa ㅇ.

The following are measurements of the legs:-


This spider was found in company with ants nos. 2 and 17. It is very probably a $\sigma^{*}$ of M. maxillosa, which it strongly resembles in general shape and colouring, all its features being those of maxillosa exaggerated even to the falces. The only distinct difference is in the spine pairs. It is the only $\sigma$ in the collection the least like the $\circ$ maxillosa, which is so common, and I should not have hesitated to claim it as the $\delta$ did it not differ so strongly as regards teeth and tibial spines from Thorell's $\sigma M$. (Toxeus) maxillosa. It was found in company with § Epidius longipalpis described above.

## ó. Myrmarachne gedongensis, sp. n. (Text-fig. 11.)

Prosoma.-Length a little $>$ opisthosoma $=p_{4}+t_{4} . \quad$ Caput $>$ thorax. Front wall slightly projecting in centre and stepped back to eyes 2. Side walls straight, very slightly approaching backward. Back wall nearly straight. Groove not marked from above, but walls of thorax going on nearly straight with slight convex and then concave slope to rear, which is cut nearly square and about $\frac{1}{2}$ greatest width and strongly rimmed.

On side view caput flat but convex near eye 4 , back slope steep, groove about $\frac{2}{3}$ caput, the broad thorax rises convexly to $\frac{1}{3}$ and then falls gradually convexly and concavely to rim, which is shallow.

Eyes.--1st row straight by summits, 1.1 in contact; 2 subcontact with 1 and a little stepped back, $=\frac{1}{3} 1$. Eye square broader than long, parallel. 3 slightly nearer 2 than $4.4>2.4 .4=$ 4-rim.

Falces.-Length $=$ cephalothorax, breadth $=\frac{1}{4}$ length. From above inner edge straight, outer convex, being widest at $\frac{2}{3}$, end cut square. From side slightly concave above, below a double flat step to $\frac{1}{3}$, then straight to end. Lighter colour and granulated. Unguis $>\frac{2}{3}$ paturon, bisinuate, with basal curve nearly flat, simple. Teeth, upper 6 or 7 , of which 1 st is very strong at root of unguis and pointing forward, 2 or 3 close to it, and remaining teeth at other end of groove and wide. Lower 7 to 9 , subequally spaced and decreasing from base to apex of unguis. Groove well marked.

Maxillce.-As turriformis, but outer corner sharp. Length $=c_{1}$.

Labium.-As turriformis, but hase is very distinct, terminating in a short point well in front of sternum. Apex very slightly concave and scopula light.

Palpi.-Spring from near base of maxilla. $\mathrm{Tr}>$ width maxilla; f slightly $>\mathrm{tr},<\mathrm{c}_{1}$, rather strongly curved ; p slightly $<\mathrm{tr}$, very slightly widening forward. Ti a little longer and much stronger than patella, much wider apically and with strong pointed outer, lower, apical process. Fringe of long dark hairs on inner edge. Ta broader at base, cut off square at apex, slightly longer than ti, hairy. Fovea occupies about $\frac{2}{3}$. A spine springs from outer base of organs and passes round on inner edge of fovea, terminating with a slender forward point at about middle of apex.


Myrmarachne gedongensis, sp. n., ${ }^{\top}$.
a. Profile. b. Sternum \&c. c. Palpas.

Legs.-4.1.3.2, with considerable differences.
1st. c longest, length $=2 \frac{1}{2}$ breadth, parallel or very slightly tapering, light, slightly dark at base and sides.
tr long, nearly $\frac{1}{2} \mathrm{c}$.
f slightly clubbed at base, dark.
$p=\frac{1}{2}$ ti, 1 pair spines, light.
ti, spines from 6 and 7 to 8 and 9 , strong, and last 4 or 5 all terminating at end of joint, light.
$\mathrm{m}, 2$ spine pairs, of which 1 st very long and both terminate about middle of ta, darker.
ta $<\frac{1}{2} \mathrm{~m}$, dark.

2nd. e very short and gibbons, dark.
tr very short, light.
$f$ less clubbed than $f_{1}$, light with dark sides.
${ }^{\prime} p=\frac{1}{3}$ ti, no spines.
ti, 3 or 4 spine pairs.
$\mathrm{m}, 2$ spine pairs, all spines are very strong for 2 nd leg.
tal $<\frac{1}{2}$ ti, light.
3 3rd. c \& tri larger than $\mathrm{c}_{2}$ and $\mathrm{tr}_{2}$.
f dark, clubbed slightly.
$p=\frac{1}{3} \mathrm{ti}$.
ti cylindrical.
$\mathrm{m}>\mathrm{ti}, \mathrm{ta}=\frac{1}{4} \mathrm{~m}$.
4th. c a little $>\mathrm{c}_{3}$, but much $<\mathrm{c}_{1}$, slightly tapering.
tr much longest, $>\mathrm{c},<\mathrm{c}_{\text {}}$, cylindrical, light with dark sides.
f long, slightly clubbed, dark.
$\mathrm{p}=\frac{\mathrm{I}}{5}$ ti, slightly curved, dark.
ti cylindrical, dark.
m slightly $<$ ti, darkest at end sides.
$\mathrm{ta}=\frac{1}{3} \mathrm{~m}$.
Colour contrasts of legs very slight.
Sternum.-Short-pointed between $c_{1.1}$, which are about $\frac{1}{3}$ their width apart, and between $c_{l .2}$, sharp-pointed between $c_{2.3}$, which are only very slightly further apart than the others, and thence undulating to a not very long point in front of $c_{4,4}$, which are not quite in contact.

Pedicel.-Shortish, $\mathrm{j}_{1}>\mathrm{j}_{2}$, lst lorm parallel-sided and concave behind, slightly wider than 2nd. Below lorum is continued forward by a narrow projection towards stermum, but not to meet it.

Opisthosoma.- Ovate, thickest at middle, very slight constriction at $\frac{1}{4}$, which is marked by slight oblique white lines at sides. General colour brown-green. Below, central longitudinal wide lighter marking from epigastric fold to spinners, slightly constricted near front. Epigastrie fold procurved, with area in front yellow-brown and corneous.

Spinners.-As biseratensis.
Anus.-Distinctly protuberant, with two joints.

## Short Description.

Prosoma very slightly $>$ opisthosoma $=p_{t}+t_{t}$. Caput $>$ thorax. Groove and thorax moderate.

Falces $=$ cephalothorax, mguis $>\frac{2}{3}$ paturon. Upper teeth 6 or 7 , of which 1 very strong at root of unguis and 2 or 3 adjacent, remainder distantly spaced at other end. Lower teeth 7 to 9 .

Palpi.-Trochanter rather long, tibial process strong. Ta distinctly $>t$. Fovea occupies more than half tarsus; organs have spine springing from onter base and passing round inner edge to terminate in fine point in front.

Legs 4.1.3.2, considerable intervals. Spines of ti, from 6.7
to $8.9, \mathrm{p}_{1} 1$ pair, $\operatorname{tr}_{2} 3$ or 4 pairs. $\mathrm{c}_{2}$ and $\operatorname{tr}_{4}$ much larger than the others.

Pedicel shortish, with long and narrow point reaching forward between $\mathrm{c}_{4.4}$ towards but not reaching sternum.

Opisthosoma ovate, with faint attempt at constriction at $\frac{1}{4}$ and slight white lateral markings thereat.

Note.-Description is based on two males of lengths 5.9 and 7.0 mm . from Bukit Besar and Gedong.

The following dimensions are from the 7.0 mm . specimen :-

> Prosoma 3•2. Opisthosoma 3•2.

Legs $1 \ldots \ldots$ c + ti $1 \cdot 5$, f $2 \cdot 9, \quad \mathrm{p}$ 千ti $3 \cdot 4, \quad \mathrm{~m}+$ ta $1 \cdot 9=9 \cdot 7$

| $2 \ldots \ldots$. | $\#$ | $1 \cdot 0$, | , $1 \cdot 6$, | $\#$ | $2 \cdot 0$, | $1 \cdot 6$ | $=6 \cdot 2$ |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $3 \ldots \ldots$. | $\#$ | $1 \cdot 0$, | , $2 \cdot 1$, | $\#$ | $2 \cdot 3$, | $\#$ | $2 \cdot 3$ | $=7 \cdot 7$ |
| $4 \ldots \ldots$. | $\#$ | $1 \cdot 8$, | $\# 3 \cdot 2$, | $\#$ | $3 \cdot 2$, | $\#$ | $3 \cdot 0$ | $=11 \cdot 2$ |

One of the specimens was accompanied by ant no. 6 .

## Agorius Thor.

Thorell, St. Rag. Mal. 1877, p. 216 ; E. Simon, Hist. Nat. Araign. ii. p. 537 (1901).

## ¢. Agorius gracilipes Thor. (Text-fig. 12.)

Prosoma. Ceplalothorax.- (a) Front truncated with very slightly recurved edge beyond front, of which eyes 1.1 project slightly and 2.2 less. Sides straight and very slightly approaching to $\frac{2}{3}$ thorax, where they commence to approach more rapidly with slightly concave edge. Hind end broadly truncated, somewhat concave. Hind end of caput is slightly indented and thoracic grooves indicated. Separation of thorax from caput clear, but groove not deep and no constriction at sides. Edge is rather dark at end and ends of sides of thorax, but does not appear as a distinct rim. General colour light reddish yellow except for black eye-frame on front and sides.
(b) Eyes 1.1 project strongly like the buffers of a waggon, 2.2 the same slightly above and behind, clypeus is almost negligible and underhung, and these together form the front wall. Top of caput distinctly convex from eyes 2 to 4 , and again over 4 , being about $\frac{2}{3}$ as high as long. Dark eye-frame reaches only to about bottom of eyes 2.4 and is almost broken just in front of 4 . Groove slopes at $45^{\circ}$ from above 4 , and is only about as deep as middle of 4 . 'Thorax rises convexly to about $\frac{1}{3}$ and falls concavely for last $\frac{2}{3}$, end being slightly turned up but not really rimmed. Thorax as high as caput.
(c) Clypeus very slight, smooth, procurved. Short grey hairs around eyes 1.1, and dark hairs longer on clypeus and above eyes. Top of caput flat or very slightly convex. Sides slope inwards very slightly and convexly from below eye 2, which projects strongly and forms angle.

Eyes.-Clypeus concave, $<\frac{1}{3}$ eye 2. 1st row strongly recurved, top of 1 being level with mid 2. $2=\frac{1}{2} 1$, all lst row in subcontact. Eye-quadrangle broader than long and very slightly narrower behind. $4<2.3$ distinctly nearer 2 than 4 and slightly inside the upper 2.4 tangent. 2 are on attached fore and aft projections. 4 project strongly outwards.

Falces.-Almost concealed from above, nearly horizontal, length only a little > .diameter eye 1 . Moderately broad and rounded on top and side views. From below slightly tapering, with a few dark hairs in centre. Angle well rounded. Groove distinct. Ungues slope inwards. Upper teeth 1 large at angle, 1 small below. Lower, 1 large about mid-unguis, but slightly less than large upper. There appears to be a small tooth at end of paturon behind root of unguis. Scopula of long light hairs on outer margin.

Text-figure 12.

a. Profile. b. From above. c. Sternum \&c. d. First leg. e. Epigyne.

Maxillce.-Much shorter than Myrmarachne, < $\mathrm{c}_{1}$, rounded and expanded at end and slightly spreading. Serrula at outer edge and end; dark scopula at truncation, which is short and nearly transverse, a few hairs along outer edge.

Labium.-Very short, broader than long. White edge with scanty dark scopula.

Palpi.-Spring from about half maxilla. Tr short, $<$ width of maxilla, and 2nd division small; f a little $>$ maxilla, slender,
cylindrical, straight or very slightly curved, with slight dusky shading at sides; $p=\frac{1}{2} \mathrm{f}>\mathrm{tr}$, slightly wider at apes than base; ti $<\mathrm{p}$ but much thicker and more hairy ; ta $>$ ti, joint between the two somewhat curved. $\mathrm{p}, \mathrm{ti}$, and ta all have hairy fringes on both sides, increasing from very slight at $p$ to strong on ta; on back they are greenish. Ta and ti are slightly flattened, but not nearly to the same extent as Myrmarachne, and the joint between them is quite distinct.

Legs. $-4=1-3-2$, but measurements not good and either 4 or 1 may be the longer.
1st. c length $=2 \frac{1}{2}$ width $=$ nearly width of sternum, light, cylindrical.
tr $=1 \frac{1}{2} \mathbf{c}$, cylindrical, a little darker.
f long, clubbed at base, slender, darker, and very dark at one side below.
$p=$ sternum $>\mathrm{f}$, slenderer, dark below, light at end; this extraordinarily long patella is the most characteristic feature of the genus.
ti $<\mathrm{p}$, with angle half way, after which it becomes stouter and bends outwards. 5 spine pairs beginning at angle, all are strong, 1 st reaches more than half way to apex, and remainder all end level with apex.
m very short, $<\mathrm{tr}$. 2 spine pairs, 1 st very strong, springing from middle and reaching well beyond 2nd, which springs from end and reaches to mid ta. Joint about as stont as end of ti.
ta $=1 \frac{1}{2} \mathrm{~m}$, lighter and slighter.
2nd. c $<\mathrm{c}_{1}$, white.
$\mathrm{tr}=\frac{1}{2} \mathrm{c}$, light, with black blotch at lower apex.
$f$ very slightly if at all clubbed at base, the black of tr is carried up as a strong black line below or rather to the side of whole length of joint.
$p=\frac{1}{3} \mathrm{f}$, slightly curved and stouter at apex.
$\mathrm{ti}=2 \mathrm{p}$, slender.
$\mathrm{m}=\frac{2}{3} \mathrm{ti}$; ta missing.
3rd. c a little shorter and stouter than $\mathrm{c}_{\mathrm{i}}$.
$\operatorname{tr}=\frac{1}{2} \mathrm{c}$.
f very slightly, if at all, clubbed at base, slightly clouded at sides.
p , ti, m as 2, but slightly stouter.
$\mathrm{ta}=\frac{1}{2} \mathrm{~m}$.
4th. c very strong, slightly broader at base than apex, longer than $c_{1}$, stouter than $c_{3}$.
tr $>\mathrm{c}$ and $>\operatorname{tr}_{1}$.
Remaining joints as 3.
All tarsi have claw-tufts and two pectinate claws.
Sternum.-Shield-shaped, with expanded ears at front. $\mathbf{c}_{1.1}$ are wide apart, springing from opposite the ears; $c_{1.2}$ is broad, nearly $=$ breadth $c_{2,}, c_{22} c_{3}$ less, $c_{3} c_{4}$ least, $c_{4.4}$ in contact, sternum
terminating in a short point in front of them. The legs appear to spring from a separate chitinous plate lying between ilorsal shield and sternum, and prolucer into a long socket to take $\mathrm{c}_{1}$.

Pedicel.-Very short; it is just possible to see its point of entrance below dorsal concavity at top, but it camot le seen at all from below.

Opisthosoma.- Ibdomen $=1 \frac{1}{2}$ cephalothorax, subcylindrical, width $=$ height $=<\frac{1}{2}$ length. Rounded in front and behind, being slightly wider behind, slight constriction half way. On side view constriction at $\frac{1}{3}$. Gromd-colonr greenish brown above formed by a light ground dark-lined, two small white blotches at constriction in a transverse line, followed by a large central white blotch. From the small blotches white lines slope downwards and backwards across the sides, getting wider as they proceed and connecting with white gromed-colour which prevails below behind epigastric fold to spinners. Spiracular plates chitinons, yellowbrown, and so wide apart as to be hardly visible from below and noticeable from the side. Between them a strip of same colour, but I think not chitinous. Epigastric fold is strongly procurverl, but not well marked.

Epigyne.-A small white semicircular pit edged with dark red and with a pair of dark markings forming ares of a semicircle outside. Not very marked, but clearer than in Myrmarachne.

Spinners.-As seen from below, spring from a very distinct half-socket, the edges of which, however, are not continued round. All spring from separate sockets inside the above and are $2-$ jointed, the basal joint being very long, the second very minute. 1st. Very slightly tapering, about twice as long as broad, brownyellow. 2nd. Equal length, lightest, slenderest. 3rd. Dark as 1 st at base, light as 2nd at apex, intermediate in stoutness but nearest 2nd, longest.

Note.-The description is from a single of found at Bukit Besar, 2500 ft . altiturle, in cavity under the bark of a rotten sapling.

The following are measurements:-
Total length 7.0 mm .

The legs were damaged and impossible to measure with accuracy, so that either 1 or 4 may be the longest.

Ants accompanying, none.


[^0]:    * Communicated by the Secretary.

